SINGLE CHANNEL PALM ECG: CARDIO-A AND CARDIO-B

CE 0476

33259

CE 0476

33260

4 MEASUREMENT MODES: PALM, LEG, CHEST, TRADITIONAL

PALM ECG'S are designed for general practitioners or for domestic users who suffer from cardiovascular diseases such as hypertension, coronary disorders, giving the possibility of a daily ECG test.
Records can be saved and used as a reference for clinical applications.
4 measurement modes: palm, leg, chest or lead wire traditional measurement.
Main features:
- small, portable and easy to use
- 30 second ECG waveform and measurement results
- 600 (CARDIO-A) or 1200 (CARDIO-B) ECG waveform can be saved
- 5 hours (CARDIO-A) or 10 hours (CARDIO-B) ECG continuous measurement data storage
- analysis and report of 8 types (CARDIO-A) and 17 types (CARDIO-B) of ECG waveform
- USB 2.0 interface with option data cable and ECG viewer software
- traditional measurement with optional ECG cable

CARDIO B with bluetooth module for wireless data transmission.
To download data on your smartphone or tablet, compatible with Android.

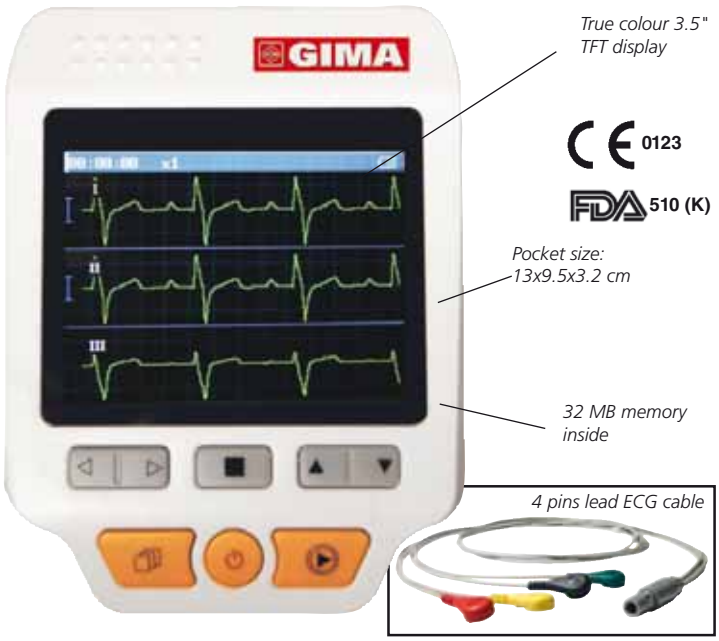
GIMA code	PALM ECG
33260	CARDIO-A palm ECG
33261	CARDIO-B palm ECG - colour display
33259	CARDIO-B Bluetooth palm ECG+viewer software
	ACCESSORIES
33265	ECG viewer software+USB 2.0 cable - for 33260, old 33261
33249	ECG viewer software + USB 2.0 cable for new 33261 since SN: XXS02JL01044 - Jan 2014
33248	New ECG 3 pin lead cable - 3 leads - optional - 2012 from SN: XXQ00HJ03925 for 33260 from SN: XXS02HL01709 for 33261
33264	Old ECG banana lead cable - 3 leads - optional

TECHNICAL SPECIFICATIONS

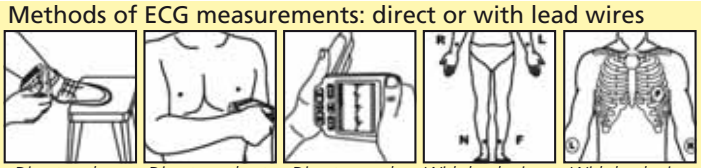
	CARDIO A	CARDIO B
ECG bandwidth:	0.5 Hz - 40 Hz	1 Hz - 40 Hz
Heart rate measuring range:	30 - 240 bpm ± 2 bpm	
LCD back light display:	128x64 dot matrix	240x160 dot matrix
Display size:	49x25 mm	57.6x40 mm
Power:	2xAAA batteries	
Dimensions	115x58x18 mm	125x70x21.5 mm
Weight	65 g	106 g

CARDIO-C: 3 CHANNEL POCKET ECG

iHealth Bluetooth ECG
see page 4



Methods of ECG measurements: direct or with lead wires



Direct on leg | *Direct on chest* | *Direct on palm or wrist* | *With lead wires, need limb electrodes 33364* | *With lead wires, need chest electrodes 33327*

• 33245 CARDIO-C POCKET ECG 3 channel
- small size, light-weight and easy to carry
- one-key measurement
- clear ECG waveform and interpretation of results on colour dot-matrix TFT 3.5" screen
- up to 19 types of measurement results
- high capacity built-in memory: 24 hours records storage and review for single channel waveform and 8 hours record storage and review for 3-channel waveforms
- quick measurement: **by built-in metal electrodes**, on palm, chest or leg or **by external lead wires** (needs optional limb and chest electrodes)
- data management to review or delete data records locally or to upload to PC

Supplied with ECG viewer software, USB cable, power transformer, ECG 4 pins lead wire, 25 disposable electrodes.
Other accessories see at page 235.

• 33364 SET OF 4 LIMB CLAMP ELECTRODES (4 COLOURS) - adult
• 33327 DISPOSABLE TNT ELECTRODES Ø 55 mm

TECHNICAL SPECIFICATIONS

Heart rate measuring range:	30 bpm ~ 240 bpm
Heart rate measuring accuracy:	± 2 bpm or ±2% whichever is greater
ECG bandwidth:	0.5 Hz ~ 40 Hz
Internal noise level:	≤ 30µVp-p
Display scale:	5.0 mm/mV ±10%
Common-mode rejection ratio (CMRR):	≥ 60 dB
Waveform sweeping speed:	20 mm/s ±10%
Input loop current:	≤ 0.1 µA
Input impedance:	≥ 5 mΩ
Power	
Power:	4 AA alkaline batteries
Supply voltage range:	4.4 ~ 6 VDC
Max average working current:	≤ 160 mA
Auto power-off:	can be adjustable between 1-5 mins
Low battery indication:	4.4 VDC ±0.2 VDC

MINDRAY BENEHEART R3 ELECTROCARDIOGRAPH

• 33301 MINDRAY BENEHEART R3 ELECTROCARDIOGRAPH 3 channels

BENEHEART R3 is a lightweight portable cardiograph for resting ECG diagnosis.

Reliable analysis - Glasgow algorithm

BeneHeart R3 utilizes the University of Glasgow ECG analysis algorithm, one of the world-leading resting ECG interpretations with 50 years of history.

Great Portability - only 1.2 kg

The BeneHeart R3 weighs only 1.2 kg with battery, easy to carry.

5" clear colour display

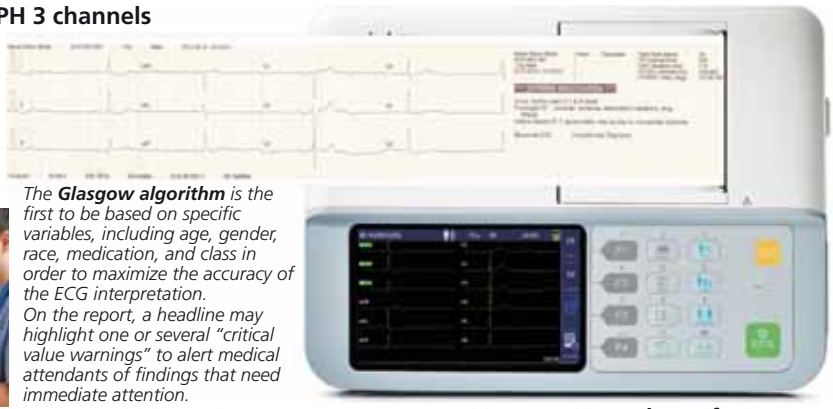
5" colour screen offers the highest resolution in industry, enabling clinicians to observe real-time waveforms accurately.

Convenient operations

ECG recording is automatically unfolded on the writing pad at the top of the unit for notes or signature.

Unique recorder - Z-folded or rolling paper

Compatible with both rolling paper and Z-fold paper. You can easily switch between these two styles of paper without dismantling the pressure lever.



*The **Glasgow algorithm** is the first to be based on specific variables, including age, gender, race, medication, and class in order to maximize the accuracy of the ECG interpretation.*
On the report, a headline may highlight one or several "critical value warnings" to alert medical attendants of findings that need immediate attention.

• 33014 ROLL THERMAL PAPER - 80 mm x 20 m - box of 10

• 33016 Z-FOLD THERMAL PAPER - 80x70 mm x 200 sheet - box of 25

STANDARD ACCESSORIES

Cable with banana plugs, IEC	1 roll paper
Limb clamp set of 4	Rechargeable battery
Chest bulb set of 6	User manual in: GB, FR, DE, HU, IT,
Glasgow algorithm* in GB, IT, DE	PL, ES, TR

**Available in 13 languages as internal software by mid 2014*

TECHNICAL SPECIFICATIONS

Power

Power supply:	AC input without external power adaptor or battery operation
AC power:	100 to 240 VAC ± 10% 60 VA
Battery-type:	rechargeable Lithium ion battery 11.1 V typical, 2,500 mAh
- capacity:	6 hours of continuous operation without recording or 500 ECGs in 2.5 x 4 format at 25 mm/s and 10 mm/mV
- charge time:	3.5 hours with power off

Processing

ECG analysis samplig rate:	500 samples/second (sps)
Digital sampling rate:	1,000 samples/second/channel
Pacer detection sampling rate:	16,000 samples/second/channel
ECG amplifier:	DC-coupled
Acquisition mode:	Pre-acquisition or post-acquisition provide 10 seconds of instantaneous ECG acquisition
Baseline drift filter:	0.05 Hz, Baseline Drift Removal (BDR)
AC filter:	50/60 Hz ± 0.3 Hz
ADC:	24 bit
Imput impedance:	50 MD at 10 Hz, defibrillator protected
Patient leakage:	< 10 µA
Heart rate meter:	30 to 300 BPM ± 10% or ± 5 BPM, whichever is greater
Sensitivity/gain:	5, 10, 20 mm/mV, Auto

DIsplay

	24 bit Colour display TFT LCD with LED graphics backlit
Resolution:	800x400
Display data:	Patient ID, gender, age, heart rate, clock, battery power indicator, waveforms, lead labels, speed, gain, filter settings, warning messages, information messages, network status and USB
Thermal printer:	Dot array/Width 80 mm/speed 5, 12.5, 25, 50 mm/s

Software

Measurement and interpretation:	according to University of Glasgow ECG analysis algorithm
Resting ECG mode:	Records and prints 12-lead resting ECG with 10-second duration as a standard
Patient information:	Patient ID, secondary ID, age, date of birth, gender, race, medication class and V3 electrode placement
Internal storage:	800 ECGs in internal memory
ECG Storage format:	PDF format and Mindray storage format
Multi-language internal software:	GB, FR, IT, ES, DE, PL, PT, TR, RU, HU, RO, CZ, CN

Report formats	Thermal printer/PDF/A4/letter
Size/Weight:	250x194xh 56 mm/1.2 kg including battery

PC-ECG WITH INTERPRETATION SOFTWARE AND USB PORT

• 33320 PC-ECG + ECG LAB SOFTWARE

Innovative PC-ECG device that can be connected to your PC via USB port. No power cable is required as it is powered through the USB PC cable. The unit is supplied with a 10 banana plug ECG cable (length 295 cm) and a powerful interpretation software (GB, FR, IT, DE, ES, PT, CN).

Main software features:

- 12 lead resting ECG with interpretation

- vector ECG

- sampling screen colour customization
- multi ECG report formats
- standard or thermal paper print, B&W or colour
- auto interpretation On or Off
- measurement table
- tests comparison
- 90s resting ECG full disclosure
- multi hour ECG monitoring with holter analysis
- simple exercise stress test with report
- e-mail, PDF, ASCII, HL7, Dicom, GDT Interfaces

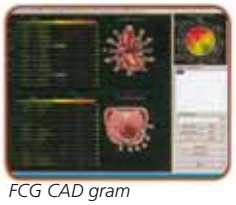
• 33328 ECG CABLE - SPARE

• 33321 PC-ECG+CARDIOLOGY SOFTWARE

Same as code 33320 but with the following specialist functions:

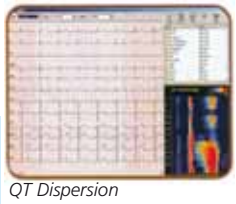
- timed vector ECG
- SAECG (Signal Averaged ECG) ventricular late potentials analysis
- QTd analysis
- hour ECG
- High Frequency ECG (HFECG)
- Frequency Cardiogram (FCECG)
- simple exercise ECG

• 33322 CARDIOLOGY SOFTWARE to upgrade 33320 into 33321



FCG CAD gram to locate coronary artery disease and ischemia

3-VCG analysis



QT Dispersion QTD analysis with chroma map

Above 3 pictures refers to code 33321

PC not included

Only 550 g

TECHNICAL SPECIFICATIONS

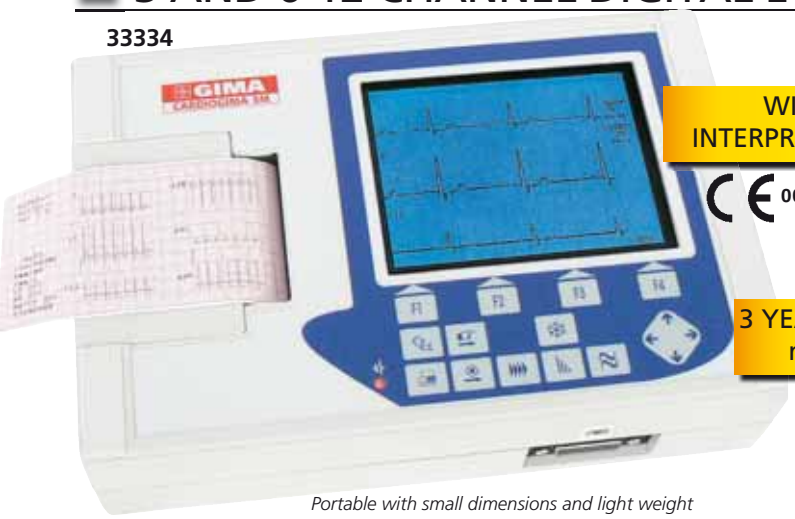
Communication port:	USB - Support HL7, Dicom interface
Size:	120x85x28 mm - 190 g
Power source:	5V DC (from PC USB port)
Patient insulation:	4000 V AC
Defibrillation protection:	built-in patient cable
Sample rate:	10240Hz - Sample accuracy: 16 bit
PC minimum requirements:	Windows 2000, XP Vista and Windows 7 CPU ≥ 1 GHz - HD ≥ 40 G - RAM ≥ 256 M

STANDARD ACCESSORIES

4 limb electrodes
6 chest electrodes
Patient cable 10 leads, 10 electrodes
USB pen driver
CD software
Banana plug

3 AND 6-12 CHANNEL DIGITAL ECG WITH HIGH RESOLUTION MONITOR

33334



WITH INTERPRETATION

CE 0068

3 YEARS WARRANTY made in Italy

33350

Large, high resolution backlight Display: LCD 320x240 dots.

Portable with small dimensions and light weight

• 33334 CARDIOGIMA 3M - 1-3 ch. with interpretation
• 33350 CARDIOGIMA 6M - 3-6-12 ch. with interpretation (monitor 3-6 channels, printer 3-6-12 channels)
- LCD monitor in Standard or Cabrera format with base line setting
- High resolution thermal printer (8 dots/mm): hardcopy 1-3 or 3-6-12 channels real time with possibility to print a millimetric grid
- Manual or automatic recording
- Image freeze with memory scrolling for reviewing and hard copy of acquired signals (Memory 10 seconds for each lead)
- Digital filters for elimination of muscle tremors, power line and base line noises.
- Pacemaker detection
- Power supply by built-in high capacity Ni-Cd batteries and fast charging time
- Very simple operation by pre-defined fast keys and menus
- Based on a risk processor for a full digital signal processing Made in Italy.

STANDARD ACCESSORIES 3M AND 6M

Patient cable
4 limb electrodes
Manual (English, Italian)
Rapid guide: English, Spanish, Italian
6 chest limb electrodes
1 roll of paper
1 bottle of gel
Battery

GIMA code	CARDIOGIMA ACCESSORIES	Minimum order
27139	Transport bag (see at page 50)	-
32996	Thermal paper 58 mm x 25 m (Cardiogima 3M)	box of 20
32953	Thermal paper 112mm x 23m (Cardiogima 6M)	box of 10
33328	ECG cable - spare	-

TECHNICAL SPECIFICATIONS CARDIOGIMA 3M AND 6M

Power supply: internal rechargeable ni-cd batteries
AC/DC Adapter: 100-240V, 50-60 Hz; 200mA
Battery autonomy: 2.5 hours
Applied part: CF type
Input impedance: > 100 Mohm
Frequency response: 0.05: 145hz
Cmrr: > 91 dB (33334), Cmrr: > 100 dB (33350) Time constant: > 3.2 s
Acquisition: 12 bit 800 samples/sec/channel-isochrome
Leads: 12 standard or Cabrera
Sensitivity: 5mm/mV; 10mm/mV; 20mm/mV ±5%
Scrolling speed: 5mm/s; 10mm/s; 25mm/s; 50mm/s
Signal memory: 10s for each lead
Printer: thermal printer 8 dots/mm, paper 58 mm (3M) 110 mm (6M).
Filters: muscles tremors 35Hz digital; power line interferences 50-60Hz digital; high pass 0,5Hz digital
Defibrillation protection: internal
Display/Hardcopy: 1/3 channel (3M) 3/6/12 channel (6M)
Dimensions: 240x160x65 mm. Weight: 1.5 kg. Made in Italy

CARDIOGIMA 1M - 1/3 CHANNEL ECG WITH PARAMETERS CALCULATION

CE 0068

3 YEARS WARRANTY made in Italy

33329

• 33329 CARDIOGIMA 1 M - 1-3 channel ECG with monitor
A real portable ECG with small dimension and light weight, with LCD monitor 128x64 pixel, high resolution thermal printer (8 dots /mm hardcopy, 1 channel real time) and parameters calculation. With manual or automatic recording, memory 10 seconds for each lead. Includes digital filters for elimination of muscles tremors, power line and base line noises. Based on a risk processor for a fully digital signal processing. Made in Italy.
• 32996 THERMAL PAPER 58 mm x 25 m - box of 20
• 33328 ECG CABLE - spare

STANDARD ACCESSORIES

Patient cable
1 bottle of gel
Manual (English, Italian)
Rapid guide: English, French, Spanish, Italian
1 roll of paper
4 limb electrodes
6 chest limb electrodes
Battery

TECHNICAL SPECIFICATIONS

Power supply: internal rechargeable Ni-Mh batteries
AC/DC Adapter: 100-240V, 50-60 Hz; 200mA
Battery autonomy: 3 hours
Applied part: CF type
Input impedance: > 100 Mohm
Frequency response: 0.05: 145hz
Cmrr: > 100 dB time constant: > 3.2 s
Acquisition: 12 bit 800 samples/sec/channel
Leads: 12 standard or Cabrera
Sensitivity: 5mm/mV; 10mm/mV; 20mm/mV ±5%
Scrolling speed: 5mm/s; 10mm/s; 25mm/s; 50mm/s
Signal memory: 10 sec for each lead
Printer: thermal printer 8 dots/mm, paper 58 mm.
Defibrillation protection: internal
Filters: muscles tremors 35Hz digital; power line interferences 50-60Hz digital; high pass 0.5Hz digital
Dimensions: 190x120x60 mm. Weight: 1 kg.
Conformity standards: 93/42/CEE; EN60601-1; EN60601-1-2; IEC601-2-25 Made in Italy

SMART SINGLE AND THREE CHANNEL ECG

33330

33332 *Single and three channel with 12 channel display*

PORTABLE ECG - 1 and 3 channel
- foldable LCD screen
- built-in high resolution thermal printer
- built-in rechargeable Li-ion battery, AC/DC supply
- complete digital filter, avoid baseline drift, AC, EMG interfere
- baseline automatic adjustment
- auto/manual operation selectable
- lead-off detection and alarm

Three channel ECG also features
- interpretation tested by CSE/AHA/MIT database
- 12 Lead simultaneous acquisition
- automatic ECG parameters measurement and analysis
- auto, manual, rhythm work mode
- 12 leads grid printing on normal A4 paper by external printer

ECG Viewer Software
- compatible with Windows XP, Vista, 7
- multi format reports - XML/SCP/DICOM/PDF/JPG/BMP/TIF/PNG
- support bi-directional communication with ECG device

GIMA code	SMART ECG AND ACCESSORIES
33330	Smart SE-1 Single Channel ECG
33332	Smart SE-3 Three Channel ECG - interpretative
33336	ECG-Viewer Software (GB, FR, IT, DE, PL, RU, ES, TU)
32963	Thermal paper - roll 50mm x 25m for 33330 and 33305
32964	Thermal paper - roll 80mm x 25m for 33332/3 and 33306
33328	ECG cable - spare
33318	Rechargeable Lithium battery 2200 mAh - spare
27139	Transport bag - see page 50

TECHNICAL SPECIFICATIONS

	33330	33332
Lead:	Standard 12 leads	
Acquisition mode:	Single	12 leads simultaneously
Sensitivity:	2.5, 5, 10, 20, mm/mV	
Input impedance:	> 50 MΩ	> 50 MΩ
Filter:	EMG Filter 35 Hz (-3 dB) AC/DFT Filter 50 Hz/60Hz (-20 dB)	EMG Filter 25/35/40 Hz off DFT Fliter 0.05/0.15/0.25/0.5 Hz Low pass filter 150/100/75 Hz AC Filter 50 Hz/60 Hz
Recording mode:	Auto/Manual	Auto/Manual/Rhythm
Rhythm lead:	Any lead selectable	
Safety standard:	IEC I/CF	
Power supply:	AC: 100 V-115 V/220 V-240 V, 50/60 Hz Rechargeable Li-ion battery: voltage 14.8 V More than 3 hours continuous operation with battery supply	
Data storage:	-	144 ECG's
Thermal paper:	50 mm x 30 m	80 mm x 20 m
Paper speed:	25mm/s, 50 mm/s (± 3%)	5mm/s, 6.25 mms 10mm/s, 12.5mm/s, 25mm/s, 50 mm/s
Dimension:	288x210x70 mm	
Weight:	2.3 kg (with battery)	2.5 kg (with battery)
Display:	192x64 pixel LCD	320x240 pixels LCD (Wide screen)
Display language selectable	GB, IT, FR, ES, PL, RU, TR, UA	GB, IT, FR, ES, RU, PL, CZ, RO, DE, TR, HR, UA
Interface:	--	Ethernet, RS232, USB

STANDARD ACCESSORIES

Patient cable — 1 roll of paper — 4 limb electrodes
1 bottle of gel — 6 chest limb electrodes
Manual: English, Italian, — Rechargeable battery
On request: FR, ES, PT, TR (SE-1 and SE-3), DE, RU (SE-3 only)

CARDIOPOCKET ECG - 1 CHANNEL

• 33257 CARDIOPOCKET ECG - with software

Compact and lightweight pocket device with unbeatable features:
- wide graphic display (it allows "live" view of ECG trace and selection of all parameters)
- rechargeable lithium battery operated (80 ECG with full charge)
- PC software with interpretation included for storing data into PC (English/Italian) (operating system: Microsoft Windows 2000/XP/2003/Vista/7)
- multilanguage internal software: GB, IT, DE, FR, ES, TR, CN
- standard 12 leads ECG
- real time continuous records of clear and exact single channel ECG waveform and notes. The notes include mark, sensitivity, chart speed, filter mode, etc
- full-touch keyboard control, easy to use. Screen displays, working position, state of the instrument are clear and easy to be read.

• 32963 THERMAL PAPER - box of 20 rolls **• 33328 ECG CABLE - spare**
• 33243 RECHARGEABLE Li-Ion BATTERY up to S.N. CD 1212100050
• 33244 RECHARGEABLE Li-Ion BATTERY since S.N. CD 130730000-1

TECHNICAL SPECIFICATIONS

Power:	AC: 100-240V, 50/60 Hz - DC: 12V rechargeable battery
The instrument can work for more than 0.5 hours under DC supply	
Noise level:	≤15µVp-p
CMRR:	>100 dB
EMG filter:	35 Hz
Time constant:	≥3.2s
Sensitivity display:	standard sensitivity: 10mm/mV±5%
Sensitivity setting:	1/2, 1, 2 (cm/mV), conversion deviation ≤5%
Recording system:	thermal-array, 8 dots/mm (vertical), 16 dots/mm (horizontal, 25 mm/sec)
Paper speed:	25 mm/s - 50 mm/s ±5%
Recording paper:	50mm, 20 m, high-speed roll
Safety standard:	IEC class I, type CF
Input circuit current:	≤100nA
Fuse standard:	AL 220V/2A
Weight:	800 g (with rechargeable battery and paper)

STANDARD ACCESSORIES
Patient cable
1 roll of paper
1 rechargeable lithium battery
4 limb electrodes
6 chest limb electrodes
1 user manual (English)
1 CD software and cable for connection to PC

CARDIO 7: 12 CHANNEL RESTING ECG WITH TOUCH SCREEN

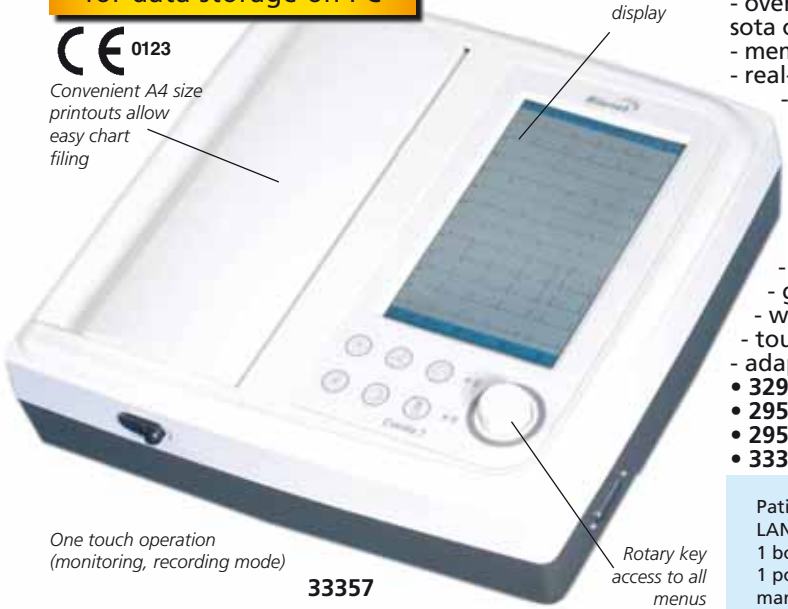
SOFTWARE EKG VIEW PLUS for data storage on PC

FDA

12 Channel simultaneous display

CE 0123

Convenient A4 size printouts allow easy chart filing



One touch operation (monitoring, recording mode)

Rotary key access to all menus

33357

- **33357 ECG CARDIO 7: 12 CHANNEL ECG WITH TOUCH SCREEN**
- 12 channel interpretive ECG
- over 130 kinds of interpretation results based on advanced Minnesota code
- memory for up to120 patients
- real-time preview monitor
- PC compatible through LAN
- multi-language selectable software (English, Russian, French, German, Italian, Chinese, Spanish, Turkish, Polish, Romanian, Portuguese)
- lead fault message
- pace maker detection
- automatic arrhythmia detection
- 5 minute long term recording
- grid function allows you to use low cost plain fax paper
- wide and clear color TFT LCD (800x480)
- touch screen for easy operation
- adaptable UL (Portrait & Landscape mode)
- **32950 THERMAL PAPER A4 - box of 5 rolls**
- **29534 RECHARGEABLE BATTERY - optional**
- **29519 TROLLEY**
- **33328 ECG CABLE - spare**

STANDARD ACCESSORIES

Patient cable - 10 leads	1 paper roll
LAN cable	4 limb electrodes
1 bottle of ECG cream (70 g)	6 chest limb electrodes
1 power cable	EKG View Plus (GB, IT)
manual (English, Italian)	

TECHNICAL SPECIFICATIONS

ECG leads :	10 lead, 12 channel simultaneous ECG and acquisition
Dimension:	296(W) x 305.5(H) x 92.5(D)mm, approx. 3.5 kg
Recording channel:	3 channels + 1 rhythm, 3 channels + 3 rhythm, 6 channels + 1 rhythm, 12 channels, 60 seconds 1 channel, 5 minutes 1 channel and beat report
Sensitivity:	2.5, 5, 10, 20, auto (I~aVF: 10, V1~V6: 5) mm/mV
Printing speed:	12.5, 25, 50 mm/s
Sampling rate:	500 samples/sec
Filters:	AC (50/60 Hz, -20dB or better) Muscle (25~35 Hz, -3dB or better) Base line drift (0.1 Hz, -3dB or better) Low pass filter: off, 40 Hz, 100 Hz, 150 Hz
Display:	7" color TFT LCD display (800x480), 12 channels preview ECG wave
Monitor display:	ID, date, sensitivity, speed, filter, form, rhythm lead
User interface:	Touch screen (alphanumeric and symbol available), Keyboard, rotary push-knob (pop-up menu)
Patient data:	ID, name, age, sex, height, weight, smoke, race
Basic measurement:	Heart rate, PR int, QRS dur, QT/QTc, P-R-T axis
Recorder:	Thermal print head, roll paper A4 report paper: 210x300 mm (8.5"x11")
Electrical:	Resolution: vertical: 8 dot/mm horizontal: 16 dot/mm Internal noise: 20 µV (p-p) max Input circuit: floating input Input impedance: ≥10 MΩ Input voltage range: ≥ ±5 mV Common mode rejection: > 100 dB DC offset voltage: ≥ ±300 mV Time constant: 3.2 sec Patient leakage current: < 10 µA Frequency response: 0.05 ~150 Hz Isolated and defibrillation protected
Signal quality control:	Disconnected lead detection Pacemaker pulse detection
ECG data storage:	storage for 120 ECGs (Internal on flash memory)
Power:	AC 95~240 VAC, 50/60 Hz or battery (option) 1.0~0.5 A, 60 W max
Battery (Ni-MH):	1 hour of normal use (approx.100 ECG printouts)
Communication:	PC connection with RS232 interface and LAN
Safety conformity:	Class I, Type BF, CE, CSA, FDA, KFDA, SFDA, CCC

3/6/12 CHANNEL ECG WITH COLOUR DISPLAY AND INTERPRETATION

Internal switchable software in 9 languages: GB, IT, FR, PL, CZ, SI, ES, RU, FI.

- **33307 CARDIOGIMA COLOUR ECG 3/6/12 CHANNELS**

3/6/12 channels electrocardiograph with analysis, HES interpretation and software.
- internal memory for more than 300 tests
- pacemaker detection
- LCD TFT color display 5.7"
- USB output for printing A4 with external printer
- PC software for data management (switchable GB, IT, FR, PL)

Made in Europe.

- **32953 THERMAL PAPER 112 mm x 23 m - box of 10**

TECHNICAL SPECIFICATIONS

One time record:	3/6/12 channels
Width of record:	112 mm
Outside USB printer:	printout A4 (210 x 297)
Record speed:	5/10/25/50 mm/s
Sensitivity:	2.5/5/10/20 mm/mV
Digital filtration of disturbances:	25, 35, 50, 60 Hz
Display:	5.7" graphic, color TFT 320 x240
Analysis and interpretation:	HES compliant with EN 60601-2-51
Internal memory:	> 300 tests
Alphanumeric keyboard	
Detection of stimulator impulses (pacemaker)	
Automatic regulation of isoelectric line	
Constant measurement of heart action (HR)	
Acoustic signalization of detected stimulations	
Paper easy-load	
Signalization of wrong connection with particular electrodes	
CMMR:	> 100 dB
Leads:	12 standard/Cabrera
Input channels:	floating, protected from impulse defibrillating CF
Power:	90-240 V, 50/60 Hz
Inside rechargeable battery:	Li-ion 7,2 V - 2200 mAh Li-ion
Power consumption:	< 30VA
Dimensions:	260 x 220 x 52 mm
Weight:	< 1.8 kg
Standards:	EN 60601-1, EN 60601-1-2, EN 60601-2-25, EN 60601-2-51
Class/Group:	Class A/Group 1 (CISPR-11)

STANDARD ACCESSORIES

Patient cable 10 leads	1 roll of paper
1 bottle of gel	4 limb electrodes
1 power cable	6 chest limb electrodes
CD manual (English, Italian)	PC software for data management

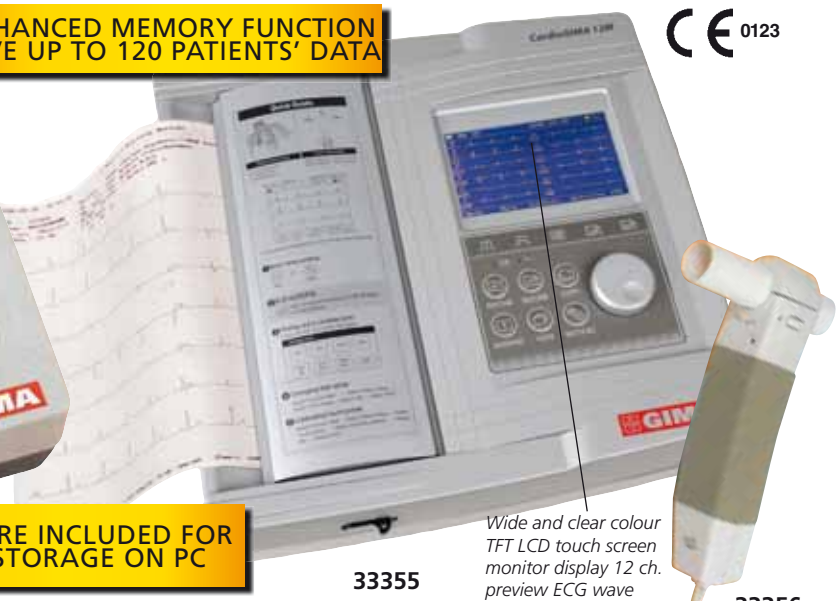
MULTI CHANNEL ECG WITH INTERPRETATION ON PAPER

CE 0123 FDA

ENHANCED MEMORY FUNCTION
SAVE UP TO 120 PATIENTS' DATA

33354

SOFTWARE INCLUDED FOR
DATA STORAGE ON PC



33355

Wide and clear colour TFT LCD touch screen monitor display 12 ch. preview ECG wave

33356

• 33354 CARDIOGIMA 12 ECG - 3-6-12 channel
• 33355 CARDIOGIMA 12 M ECG - 3-6-12 channel with monitor
We propose two models of 12 channel resting ECG recorder which are the most economically priced without performance compromise. The simultaneous record of 12 channels has a high diagnostic value - all the 12 channels are illustrated at the same time. Their design is maximized for the user's convenience (A4 size paper, one body type).
Main Features:
- 12 leads simultaneous 10-second resting ECG with interpretation in only 60 seconds (33355 in **only 5 seconds)** multilanguage, internal software+printing in English, Spanish, French, German, Russian, Italian, Chinese, Turkish, Polish, Portuguese, Romanian.
- Wide Paper Printing (A4 size thermal paper, fax paper is OK)
- Combined output of all relevant curves, patient data, date, time and instrument settings
- Pacemaker and lead fault detect (only 33355)

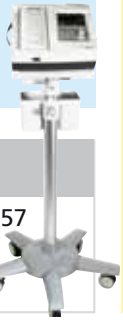
- PC Connections
Connection to PC (PC interface with RS 232 port Via LAN-software included) and submit already recorded ECG signal to other specialist for evaluation (only a modem is needed)

- ECG filing system "ECG Plus"
A fully configured PC-based filing system enables to record ECG signals, display them in real time, print and record them.

- Rechargeable batteries available (optional) with 1 hour capacity in normal use (about 100 ECG printouts)

STANDARD ACCESSORIES

1 PC software (English/Italian)	1 ECG electrode cream (70 g)
1 LAN cable	1 Power cable
1 Patient cable - 10 leads	1 Recording paper rolls
4 ECG clip-on electrodes	1 Operation manual (English/Italian)
6 Chest electrodes, suction for adult	



GIMA code	CARDIOGIMA 12 AND 12M ACCESSORIES
29534	Rechargeable battery - for 33354/33355/33357
32950	Thermal paper A4 - for 33354-5-7 - box of 5
33328	ECG cable for 33354-5-7
29519	Trolley for 33354-5-7

33355 + 29519

• 33356 SPIROMETER MODULE - for code 33355
It transforms CARDIOGIMA 12M in a 2 in 1 system: ECG-SPIROMETER.
Spirometry measuring values:
FVC: FEV 1.0, FEV 1/FVC, FEV 0.2-1.2L, FIVC, FEV 25-75, FEV 75-85%, PEF, FEF 200-1200 ml, FEF 25%, FEF 50%, FEF 75%, FIF 50%, PIF, FET 100%, FIVC.
SVC: SVC, ERV, IRV, TV,EC, IC, BC
MVV: RR, TV, MVV
Pre and post bronchodilator comparison.
Presentation: flow volume loop, flow time plot, measurement values table. Complies with ATS standard.

• 33362 DISPOSABLE MOUTHPIECES - box of 100 pcs.

TECHNICAL SPECIFICATIONS 33354 - 33355

ECG Leads:	3-6-12 channel illustration of ECG signals in continuous recording or 10 sec. recording with interpretation.
Dimension:	296x305,5x92,5 mm Approx 3 kg
Recording channel:	3, 6, 12 channel and 1 channel (60 sec.)
Sensitivity:	2,5 (only 33355) 5, 10, 20, auto (I~aVF: 10, W1~V6: 5) mm/mV
Printing speed:	12,5; 25; 50 mm/s
Filters:	AC (50/60 Hz, -20 dB or better) Muscle (25~35 Hz, -3 dB or better) Low pass filter (off, 40 Hz, 100 Hz, 150 Hz)
Display:	2x16 character LCD display (code 33354) 480x272 colour TFT LCD display (3 and 12 channel preview) (code 33355)
LCD display:	Sensitivity, speed filter status, HR, Printing form, rythm lead
LED indicator:	signal quality, power source, battery
Keyboard:	Membrane keyboard, alphanumeric and symbol available
Patient data:	ID, name, age, sex, height, weight
Basic measurement:	Heart rate, PR, QRS, QT/QTc, P-R-T axis
Recorder:	Thermal print head, thermal paper roll Report papers: width: A4: 210 mm or 8.5", lenght A4: 300 mm or 11"
Resolution:	vertical: 8 dots/mm, horizontal: 16 dots/mm
Electrical:	Internal noise: 20µV (p-p) max Input circuit: floating input Isolated and defibrillation protected DC offset voltage: ≥ ± 500 mV Patient leakage current: < 10µA Frequency response 0,05~150 Hz
Power:	Power supply: AC or built-in battery (options) Power requirement: 100-240 Vac, 50/60 Hz, 1.0-0.5 A Power consumption: 60 W max
Battery capacity:	1 hour of normal use (approx. 100 automatic ECG printouts)
Communication:	PC Connection with RS-232 interface and lan
Safety:	Class I, Type BF
Conformity:	CE, CSA Made in Korea

ECG CABLE COMPATIBLE WITH MOST ECG BRANDS

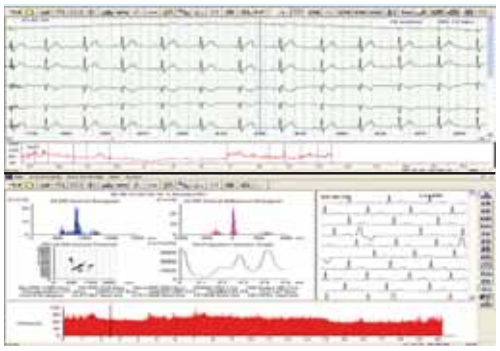
MADE IN ITALY

• 33328 ECG cable - 10 leads
Long lasting, individually tested cable compatible with the following ECG machines:
BIONET: Cardiocare, Cardiotouch
CARDIOLINE: E1, E1R, E3, Delta 300, Delta 360 C3.
CARDIETTE (Elettronica Trentina): Autoruler 12/1, Autoruler 12/3, Excel 103, Excel 106, Astron Comp 1, Astron Comp 3, Astron Comp 6, Start 100 P, Start 100 H, Start 200, Start 200HV, AR600, AR 600 ADV, AR1200, AR1200ADV.
CARDIORAPID CAMINA: K111, K112, K33, K36, K300 M, K300 P, K600 P, K600 D, K130 B, K 130 D.
EDAN: Smart SE-1, SE-3
ESAOTE P80, P8000
GIMA: CARDIOGIMA 1M, 3M, 6M, 12, 12M
HP: Pagewriter 1513, 154B/C, 1514D, 1515A/B, 1517A.
KONTRON EKG P80
MACQUAIRE CT100, CT200.
M4 MEDICAL: M traces
NIHON - KOHDEN Cardiofax 651, 6581, 8110.
PROGETTI all models: EPG junior, EPG view, EPG6 view, EPG6 view plus
SCHILLER AT/1, AT/2, AT/3, AT/4, AT/5, AT/6, AT/10, CS6, CS12, CS100, CV6, P80.

Other ECG accessories at page 235-236

HOLTER ECG SYSTEM - 24 HOURS MONITORING

Monitor not Included



Recorder:
- 12 channel Synchronized ECG Acquisition
- small ECG recorder with OLED colour screen to display real time ECG waveform and review storage data.
- capacity up to 2G
- selectable sampling rate, 200, 500, 1,000 sampling/sec
- sampling accuracy: 12 bit
- built-in FLASH storage media, to prevent the flash card from damage due to repeated insertion and pull out
- USB interface
- operating system: Windows 98, 2000, XP, 7

• 35130 ECG HOLTER + SOFTWARE
ECG Holter system includes ECG recorder and software connectable to a computer system or laser printer. The recorder has built-in flash storage media to increase memory capacity. The sampling rate of 1,000 sampling/sec has improved the quality of waveform. Accuracy of the system is ensured by AHA and MIT data.

Features:
- windows software interface (GB, IT, PL)
- quick and accurate analyzing system
- special editing system of R point
- perfect analysis function of ST segment
- analysis function of T wave of all channels and T wave trend graph
- review of ECG trend graph
- analysis system of HR variability, providing regular SDNN, SDANN, RMSSD, LF, HF, time domain and frequency domain
- QT analysis and QT trend graph
- acquire pacing ECG directly without separate channel;

Also have the functions of VCG, VLP, TVCG, HRT, TWA

• 35131 ECG CABLE - spare

TECHNICAL SPECIFICATIONS

Scale voltage: 1mV±5%
Standard sensitivity: 10mm/mV ±5%
Noise level: ≤30µV
CMRR: ≥60dB
Frequency response: 10Hz as benchmark, 0.5Hz~55Hz; -3dB
Time constant: >3.2s
Scan speed: 25mm/s ±5%
Enduring polarization voltage: ±300mV
Least measurence signal: 50µV p-p
Interference between channels: scan track deflection (result from interference between channels) <0.5mm
Product safety type: type B (internally powered)
Size: 111 (L) x60 (W) x25 (H) mm
Net weight: 105g (without battery)

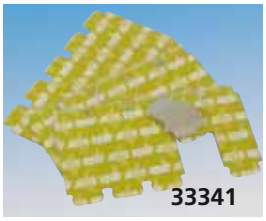
STANDARD ACCESSORIES

1 Holter recorder
1 CD with software
10 leads patient cable
10 disposable ECG sensor
1 pouch for hanging recorder
1 USB cable for data downloads
1 USB security key
Instruction Manual (English, Italian)

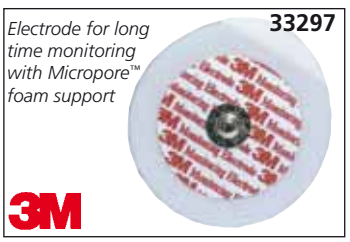
ELECTRODES AND ADAPTORS FOR MOST ECG

GIMA code	UNIVERSAL REUSABLE ECG ELECTRODES	Minimum order
33363	Set of 4 limb clamp electrodes (4 colours) pediatric	1 set
33364	Set of 4 limb clamp electrodes (4 colours) adult	1 set
33368	Set of 6 chest electrodes Ø 15 mm- silver coated	1 set
33365	Set of 6 chest electrodes Ø 24 mm- silver coated	1 set
33369	Set of 6 chest electrodes Ø 30 mm- silver coated	1 set
33323	Set of 6 chest electr. Ultra Ø 24 mm - silver coated	1 set
33324	Set of 6 chest electr. Ultra Ø 30 mm - silver coated	1 set
	UNIVERSAL DISPOSABLE ECG ELECTRODES AND ADAPTERS	
33325	Disposable FOAM electrodes Ø 36-45 mm - solid gel	1,250 pcs.
33327	Disposable TNT electrodes Ø 55 mm - solid gel	1,200 pcs.
33344	Disposable FOAM electrodes Ø 48-50 mm - liquid gel	1,200 pcs.
33367	Adaptors Ø 4 mm to connect ECG cable to code 33325/27/44	10 pcs.
33341	Disposable pre-gelled tab electrodes 34x22 mm	100 pcs.
33375	Adapter for ECG cables (pin) - veterinary	10 pcs.
33376	Adapters for ECG cables with 4 mm banana plug To be used with GIMAPLAY and CARDIOGIMA ECG	10 pcs.
33342	Universal adapter with 4 mm socket for snap and alligator connection	10 pcs.
	3M RED DOT™ ELECTRODES	
33378	3M Red Dot™ 2330 - 3.2 x 2.2 cm single use electrode with conductor adhesive gel	100 pcs.
33297	3M Red Dot™ 2239 - Ø 6 cm - 20 bags box of 50 pcs	1,000 pcs.

Conform to EN 60601-2-25



Electrode for long time monitoring with Micropore™ foam support



GIMA ECG THERMAL PAPERS FOR DIFFERENT ECG BRANDS

ECG papers

GIMA code	ECG MANUFACTURER AND MODEL	Type	Width mm	Length m	Sheet	Marker	Grid	Min. order
	BIOCARE							
32968	101G	roll	50	20	-		orange	20
32969	iE3	roll	80	20	-		orange	10
	BIONET							
32950	Cardiocare/Cardiotouch	roll	215	25	-	no	orange	5
	BTL							
32953	08 MT-MD	roll	112	23	-	no	orange	10
	BURDICK							
32954	Atria 3100/6100, quest	pack	210	300	200	yes	orange	1
	CARDIOLINE							
32955	Elan 1100	pack	112	100	300	yes	orange	25
32956	Delta 1 plus	pack	60	100	300	yes	orange	25
32957	Delta 1 plus	roll	60	30	-	no	orange	20
32958	Delta 3 plus	pack	112	100	300	yes	orange	25
32959	Delta 30	roll	183	30	-	no	orange	5
32960	Delta 60 plus	roll	210	30	-	no	orange	5
32961	Elan 2100, Delta 612	pack	210	280	200	yes	orange	1
	CONTEC							
32968	90A, 100G	roll	50	20	-	no	orange	20
32969	300G, 300GT	roll	80	20	-	no	orange	10
32970	600G	roll	110	20	-	no	orange	10
	EDAN							
32963	SE-1	roll	50	25	-	no	orange	20
32964	SE-3	roll	80	25	-	no	orange	10
32965	SE-601	pack	110	140	143	yes	orange	20
32966	SE-6-12 - 1200 EXP	pack	210	295	150	yes	orange	1
32960	SE-6-12 - 1200 EXP	roll	210	30	-	no	orange	5
	ELETTRONICA TRENTINA/CARDIETTE/CARDIOLINE							
32971	Autoruler 12/1, comp. 1x12	roll	50	30	-	yes	blue	20
32972	Start 100	roll	130	27	-	yes	blue	10
32973	AR 600	roll	60	15	-	yes	blue	25
32977	AR 600 Adv	pack	60	75	250	yes	blue	25
32974	AR 1200	roll	120	18		yes	blue	10
32978	AR 1200 (View/Adv)	pack	120	100	300	yes	blue	10
32975	Daedalus - AR2100	roll	210	20	-	yes	blue	5
32976	Daedalus, Start 200, AR2100	pack	210	150	200	yes	blue	8
	ESAOTE BIOMEDICA							
32980	P 80	roll	90	28	-	no	orange	10
32981	P 80	pack	90	70	400	yes	orange	25
32982	P 80 Power, P 80 SIX	pack	210	280	215	yes	orange	1
32983	P8000 base	pack	80	70	300	yes	orange	20
32984	P8000 Power	pack	210	280	200	yes	orange	1
32985	Archimed 4240, Archiwin	pack	210	300	200	yes	orange	1
32986	Personal 120	pack	126	150	170	yes	white	20
32987	My Cardiopad base	pack	114	90	200	yes	orange	20
	FUKUDA ME - FUKUDA DENSHI							
32988	501A, FX121, FCP-500, OP18TE	roll	50	30	-	no	orange	20
32989	FCP15, FCP11, OP110TE, OP119TE FCP2101, 2155, FX 2111, CASE10, FCP 7101, FX 7102	roll	63	30	-	no	orange	20
32990	OP 111 TE, OP 115 TE, FX102	pack	50	75	400	yes	orange	20
32991	OP 112 TE, OP 122 TE, FCP 2201 G	pack	63	75	400	yes	orange	25
32992	FCP231, OP69TE, FX7402, FX7542, FX 8322	roll	210	30	-	no	orange	5
32965	OP222TE, FX7202	pack	110	140	143	yes	orange	20
	GIMA							
32996	Cardiogima 1M, 3M	roll	58	25	-	no	orange	20
32953	Cardiogima 6M, colour	roll	112	23	-	no	orange	10
32950	Cardiogima 12, 12M	roll	215	25	-	no	orange	5
	HEWLETT PACKARD							
32999	Page Writer 100/200, M1709A, M2483A	pack	210	300	200	hole	orange	1
32988	40453 A, 43120	roll	50	30	-	no	orange	20
	KENZ - SUZUKEN							
33002	Cardico 302/601	roll	112	27	-	no	orange	10
33003	Cardico 302/601	pack	112	90	200	yes	orange	20
32960	Kenz-Cardico 1210, 1211	roll	210	30	-	no	orange	5
32988	103, R50-30R, TEC 8300	roll	50	30	-	no	orange	20
	MACQUARIE							
33006	CT 100/CT 200	roll	57	13	-	no	green	25
	MARQUETTE - HELLIGE - GE							
33010	MAC PC	roll	108	23	-	no	orange	10
33011	Case 10-12-15, MAC 3000-5000	pack	215	280	300	hole	orange	1
32966	Cardiosmart, MAC 1200/1600	pack	210	295	150	yes	orange	1
33012	MAC 400, MAC 600	pack	80	90	280	yes	orange	25
33013	MAC 800	pack	110	140	200	yes	orange	25
	MINDRAY							
33014	Beneheart R3	roll	80	20	-	no	orange	10
33016	Beneheart R3	pack	80	70	200	yes	orange	25
	MORTARA							
33017	Eli 50	pack	50	70	200	yes	orange	25
33010	Eli 100	roll	108	23	-	no	orange	10
33019	Eli 210, Eli 250, Eli 350	pack	210	300	250	yes	orange	1
33020	Eli 150	pack	108	140	200	yes	orange	25
33021	Eli 230	roll	210	20	-	no	orange	5
	NIHON KOHDEN							
33025	CARDIOFAX 8110, 9620, 1150K	roll	63	30	-	no	orange	20
33026	9110, 9130, 9132, 1350, 2350	pack	210	140	215	yes	white	10
33027	GEM, 9010, 9020, 9022, 1250, 1950	pack	110	140	143	yes	white	20
33028	ECG 1500, 1550, 9110, 9130, 9132, 9320, 2250	pack	210	295	170	yes	white	1
33029	Def. TEC 5521, 5531, BSM 2300, 3000	pack	50	100	200	no	orange	25
	PHYSIO CONTROL							
33032	Life Pack 8-9-10	roll	50	23	-	no	orange	20
33033	Life pack 11-12-15	roll	107	25	-	no	orange	10
	PROGETTI							
32953	EPG 612	roll	112	23	-	no	orange	10
32996	EPG Basik-pocket	roll	58	25	-	no	orange	20
	SCHILLER							
33037	AT 1, AT 4	pack	90	90	390	yes	green	25
32982	AT 2, CS 200	pack	210	280	215	yes	orange	1
33038	AT 10	pack	210	140	250	yes	green	10
32983	AT 101, Defigard	pack	80	70	300	yes	orange	20
32984	AT 102	pack	210	280	200	yes	orange	1
33039	Cardiolaptop, AT110	pack	210	140	150	yes	green	5
32987	Cardiopad, MS 2010	pack	114	90	200	yes	green	20
	SIEMENS							
32990	Cardiostat 1	pack	50	75	400	yes	orange	20
32991	Cardiostat 11	pack	63	75	400	yes	orange	25
	TRISMED							
33046	Cardipia 400, 406RS	roll	110	30	-	no	orange	25
33047	Cardipia 800, 812RS	roll	215	30	-	no	orange	5

ECG GEL AND SPRAY

- **33266 ECG GEL - 250 ml - box of 40 tubes**
- **33263 ECG GEL - 5 l - box of 4 bags****
- **33268 ECG SPRAY GEL - 250 ml - box of 20 tubes**

Suitable for non pre-gelled electrodes, ECG latches and pendant switches in any ECG and exertional applications.
Allows ECG waves clear transfer to equipment.
It is hypoallergenic, does not irritate skin, does not contain oil and oily substances, does not contain formaldheyde and salt, has no toxic effects and is odourless.

- **33283 PUMP FOR BAG 5 l**

33263 33266 33268

***Includes 4 empty bottles 250 ml and 1 nozzle for easy refill*

GIMA ULTRASOUND GEL

GIMA ULTRASOUND GEL
Hypoallergenic gel suitable for all kind of ultrasonography and doppler applications. It ensures the ultrasound waves come to the equipment display in a clear and uninterrupted way.

GIMA code	ULTRASOUND GEL	Minimum order
33269	Sterile ultrasound gel - sachet - 20ml - transp	box of 48
33271	Ultrasound gel - sachet - 20ml - transparent	box of 200
33272	Ultrasound gel - tube 250 ml - blue	box of 40
33273	Ultrasound gel - tube 250 ml - transparent	box of 40
33274	Ultrasound gel - bottle 1 l - blue	box of 12
33275	Ultrasound gel - bottle 1 l - transparent	box of 12
33276	Ultrasound gel - tank 5 l - blue	box of 2*
33277	Ultrasound gel - tank 5 l - transparent	box of 2*
33278	Ultrasound gel - bag 5 l - blue	box of 4**
33279	Ultrasound gel - bag 5 l - transparent	box of 4**
33283	Pump for tank 5 l and bag 5 l	

**includes 2 empty bottles 250 ml ** includes 4 empty bottles 250 ml and 1 nozzle*

GEL CLEANING DEVICES

• 33281 PROBE CLEANING SOLUTION 250 ml
It removes the gel left over the probe, makes the image clearer and extends the probe life. Thanks to the active agents contained, it prevents the bacteria to pass from patient to patient, and it ensures hygiene.
• 33282 GEL CLEANING WIPES bottle of 70 wipes
Wet wipes specifically designed to remove ultrasound gel from patient body leaving it clean and dry.

EEG PASTE

• 33262 EEG PASTE - 400 g
Used beneath EEG electrodes in EEG for brain mapping. Thanks to the active substances in its content, it allows the electrode to cling to the strand of hair easily and provides conductivity. It is hypoallergenic, does not irritate skin, soluble in water and can be cleaned easily.
Does not contain oil and oily substances. It has no toxic effects and odour.

33262

COSMETIC GEL

KONIX COSMETIC LASER & CAVITATION GEL
Laser & Cavitation gel eases the pain that patients experience during depilation and makes the device last longer by cooling the device head and window. Thanks to the vacuum technology, its active substances and its high viscosity it preserves probe from damages. It is not affected by the body salt during the use, ensures an easy application.
Technical properties: it is hypoallergenic, does not irritate skin, is water soluble and easily cleanable.
Oily substances, formaldehyde and salt free.
No toxic effects and odourless.

GIMA code	COSMETIC LASER & CAVITATION GEL	Minimum order
33253	Cosmetic gel - tube 250 ml	box of 40
33254	Cosmetic gel - bottle 1 l	box of 12
33255	Cosmetic gel - bag 5 l	box of 4**
33283	Pump for bag 5 l	

*** includes 4 empty bottles 250 ml and 1 nozzle for easy refill*

SONY VIDEO PRINTER

Size: 154x240xh 88 mm

33967

SONY

• 33967 SONY PRINTER UP-897 MD - black/white
Produces A6 size printings in about 2 seconds, with superb print quality with 325 dpi and grey level of 256 steps.
110-240 V AC, 50/60 Hz.

• 33993 SONY COLOUR PRINTER UP-25 MD
High quality analogue A6 Dye. Sublimation Printer for use in medical applications.
An ideal technology for making high quality, accurate photographic prints.

33993

SONY AND MITSUBISHI PAPER

SONY

SONY VIDEOPRINTER PAPERS

• 72730 SONY PAPER - UPP-110 HD - box of 5 rolls
High density printing paper - 110mm x 20 m

• 72731 SONY PAPER - UPP-110 HG - box of 5 rolls
High glossy printing paper- 110mm x 18 m

• 72732 SONY PAPER UPP-110S - box of 5 rolls

• 72733 SONY PAPER UPP-110HA - box of 5 rolls

• 72735 SONY COLOUR PAPER UPC-21L
(4 ink rolls + 200 supports 144x100 mm)
MITSUBISHI VIDEOPRINTER PAPER.

• 72740 MITSUBISHI PAPER LX65HM-CE

GIMA PORTABLE, BIDIRECTIONAL, VASCULAR DOPPLER

• 33230 GIMA BIDIRECTIONAL DOPPLER NON STEREO with two probes: 4 and 8 MHz
Continuous wave (CW) bidirectional doppler equipped with electronic probes for high sensitivity and low background noise.
- Bidirectional graphic separation of flow (forward and reverse)
- LCD graphic display for real time display of forward and reverse flow in bidirectional or separate mode
- Selectable amplitude scale: 1, 2, 4, 8 kHz. during the test and before printing. Preset zero line.
- 5 minutes (300 sec.) continuous and reviewable memorized test. Operator can select the most meaningful exam and print it.
- Calculation of: heart rate, peak flow and mean flow.
- Simultaneous connection of high sensitivity probes
- Internal rechargeable large capacity battery (Ni-Cd 1.8 Ah); the system can be operated during charging. Autonomy 8 hours use or 1 hour print.
- Footswitch for freezing or memorizing the graphs
- Hardcopy may or may not include the parameter calculation
- Printing time scale: 25 mm/s.
- Hi-fi audio output for correct acoustic diagnosis

• 33240 GIMA BIDIRECTIONAL PROBE 4 MHz - spare for 33230

• 33241 GIMA BIDIRECTIONAL PROBE 8 MHz - spare for 33230

• 33250 THERMAL PAPER 58 mm x 25m (pack of 5 rolls)

High definition thermal printer: 192 dots
Light, only 1.8 kg, and compact (24 x 23 x 8 cm)
CE
33230
Probe selection
Main functions are available from footswitch or Key-pad

POCKET DOPPLER WITH INTERCHANGEABLE OR FIXED PROBES

GIMA POCKET DOPPLERS
Small, lightweight, high sensitivity pocket Doppler. Its probes are ideal for use by a General Practitioner, vascular specialist for routine vascular examination in ER for vessel location, or by specialists in diabetes, urology and gynaecology. Vascular flow signals and FHR are easily located using the transducer while internal signal processing minimises noise artefacts. The flow signal is also available to the user via the built-in loudspeaker with output level controlled by rotary volume control.

TECHNICAL SPECIFICATIONS

Ultrasound
Frequency: 2, 5 or 8 MHz continuous wave
Transducer: 2 crystal narrow beam
Output power: <15mW/cm^2 SATA
Audio Response: 300Hz - 4 KHz

Unit Controls
Keys: 1 Key (for unit on/off)
Controls: rotary volume
Indicators: Yellow battery low LED

Power supply
Battery 9V Alkaline (not included)
Expected battery life: >9 hours

Output
Headset: Audio output to optional headset (not included)
Material: ABS / Noryl
Size: 150 mm by 75 mm
Weight: 299 g (with transducer)
Classification: Class I Type B - IEC 60601-I
Warranty: 2 years (probe and cable included)
Made in UK

TOP QUALITY: MADE IN UK

GIMA code	GIMA POCKET DOPPLERS
33120	DOPPLER V2005 with 5 MHz fixed vascular probe
33121	DOPPLER V2008 with 8 MHz fixed vascular probe
33123	DOPPLER V2000 (without probe)
33126	2 MHz interchangeable probe - foetal for V2000
33127	5 MHz interchangeable probe - vascular for V2000
33128	8 MHz interchangeable probe - vascular for V2000
29511	ON/OFF membrane switch spare for 33120/3

DIGITAL PORTABLE ULTRASOUND

• 33900 CHISON 8300 DIGITAL PORTABLE ULTRASOUND - 2 probe connector
Both are supplied with 10" SVGA monitor, CINE memory, 2 USB ports, software packages.
Without probes.
Professional portable ecograph with wide range of probes and high quality of images suitable in many specialistic fields.

Image:
- B, B/B, 4B, M, B/M
- harmonic imaging
- 256 gray scales
- scanning depth: max 246 mm (depending on probe)

Probes: supplied with 2 probe connector
- selection of 5 probes: Electronic Convex / Linear / Transvaginal / Transrectal / Cardiac
- wideband multi-frequency 2-10 MHz

Image processing:
- fully digital beamforming technology
- real-time dynamic imaging: RDF, RDA, DFS, DRA
- frame averaging: 8 steps
- linear averaging: 8 steps
- 6 STC slides for near far and overall gain control
- image reversing: left/right, up/down
- zoom: intelligent zoom, 4 steps

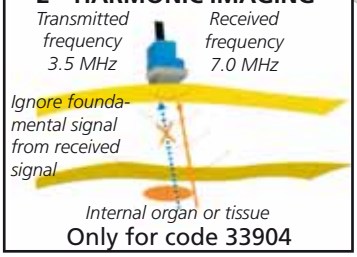
Measurement and report
- B mode: Distance, circumference, area, volume,ratio, angle, %stenosis, histogram, profile
- cardiology package: LV, mitral and aortic valve, CO, LVET, MVCF, SV, EF, cardiac index
- software package: Abdomen, OB/GYN, Cardiac, Urology
- M mode: distance, time, velocity, heart rate
- EDD tables, gestational age: BPD, GS, CRL, FL, HC, AC
- fetal weight, fetal heart measurement, growth analysis, LMP, BBT

Others
- CINE: 256 frames, play back selectable
- 10 inch, SVGA high resolution monitor
- image permanent storage: hard disk, USB (2 ports)
- can use PC printer (A4) or video printer
- operating voltage: 230V - 50Hz, 110V - 60Hz on request

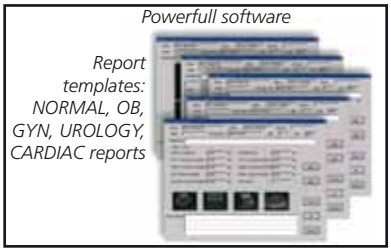
• 33901 HEIGHT ADJUSTABLE TROLLEY
• 33903 CARRYING BAG
• 33967 SONY PRINTER UP-897MD

Two USB ports
Two probe connectors
Back-light key-board for better visibility in dark room
Optional printer
Modern design, height adjustable trolley, provided of 4 wheels with brake.
33900+33901+33967

2ND HARMONIC IMAGING


Transmitted frequency 3.5 MHz
Received frequency 7.0 MHz
Ignore founda-mental signal from received signal
Internal organ or tissue

Only for code 33904



GIMA code	PROBES		FREQUENCY (MHZ)		● Main application ❍ Alternative application							
	Outlook	Scanning Method	Main freq.	4-Step Multi-frequency	ABDOMINAL	OB/GYN	UROLOGY	SMALL PARTS	BREAST	CARDIOLOGY	PROCTOLOGY	PEDIATRICS	VESSELS
33904		CONVEX	3.5	2.5/3.5/4.0/5.0	●	●							
33905		LINEAR	7.5	5.0/6.0/7.5/10				●	❍			❍	●
33906		MICRO-CONVEX (TRANSVAGINAL)	6.0	4.5/6.0/7.0/8.0		●	❍					❍	
33907		CARDIAC	3.0	2.0/3.0/3.5/4.5						●			
33908		TRANSRECTAL	7.5	5.0/6.0/7.5/10			●					●	

CHISON 600M (2012 VERSION) PORTABLE ULTRASOUND

• 33930 CHISON 600M PORTABLE ULTRASOUND 10" SVGA monitor with two probe connectors, 256 frames cine memory, USB port, VGA port, without probes
- zooming and measurement functions (max scanning depth: 252 mm)
- wide applications: GYN, urology, abdominal, small parts
- easy to use, just one day to learn all functions
- 4-steps sweep speeds for cardiac study: 2s, 4s, 6s, 8s
- 4-steps zoom with depth control: x0.8, x1.0, x1.5, x2.0
- various measurements: Distance, Circumference, Area, Volume
- full Ob/Gyn software included: 7 EDD tables (BPD, GS, FL, AD, HC, AC, CRL), G.A. (fetal age) from 4-43 weeks
- fetal weight, fetal heart rate measurement
- imaging reversing: up/down, left/right, positive/negative
- power supply: 110-230V, 50-60 Hz

• 33967 SONY PRINTER UP-897 MD
You can use any other printer for ecograph on the market
• 33901 TROLLEY FOR 33930

GIMA code	PROBES		FREQUENCY (MHZ)		● Main application ❍ Alternative application					
	Outlook	Scanning Method	Main freq.	4-Step Multi-frequency	ABDOMINAL	OB/GYN	UROLOGY	SMALL PARTS	BREAST	VESSELS
33932		CONVEX	3.5	2.5/3.5/4.0/5.0	●	●	●			
33933		LINEAR	7.5	5.0/6.0/7.5/9.0				●	❍	●
33934		MICRO-CONVEX (TRANSVAGINAL)	6.0	4.5/6.0/7.0/8.0		●	❍			

CHISON IVIS-30 AND i8 COLOURDOPPLERS

4 probe connector

• 33960 IVIS-30 ECOCOLOURDOPPLER - 15" flat high resolution LCD monitor. Supplied with 3 probe connectors, without probes, trolley, keyboard, large image storage: 320 GB HardDisk, 4 USB ports, DVD-RW.
Affordable, compact and reliable colour doppler with the advanced technologies of volume rendering, compound imaging, multi beam former imaging provides superb images. The Streamlined workflow, ergonomic outlook and compact design improve your work efficency.

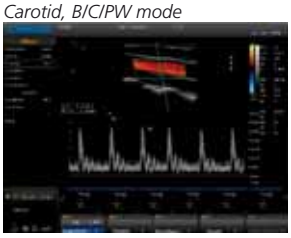
Imaging modes:
- B, 2B, 4B, B/M, M
- CFM
- PW mode
- Power Doppler / Directional PD
- duplex
- trapezoidal on linear probe
- chroma B/PW

Image processing technology:
- Speckle Reduction Algorithm (SRA)
- compound technology
- direct print to PC or video printer

• 33961 IVIS-30+4D PROBE AND PACKAGE
Same as code 33960 but with 4D real time imaging.

Umbilical cord around fetal neck, CFM mode

Carotid, B/C/PW mode



• 33965 i8 ECOCOLOURDOPPLER - 19" flat high resolution monitor
Supplied with 4 probe connector, without probes, trolley, keyboard, large image storage: 320 GB HardDisk, 6 USB port, DVD-RW, VGA format, I-image.
Digital colour Doppler System with professional features:

Imaging mode:
- B, 2B, 4B, B/M
- CFM, B/BC
- PW mode, HPRF
- Power Doppler / CW Directional PD
- instant triplex, duplex, quadplex
- trapezoidal on linear probe
- panoramic
- chroma B/M/PW/CW

Apical 4 chamber B/BC mode

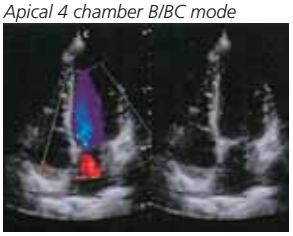


Image processing technology:
- Tissue Harmonic Imaging (THI) on all probes
- Speckle Reduction Algorithm (SRA)
- Multiple Compound Imaging (MCI)

Fetal face 3D

Wideband multifrequency probes
Continuously adjustable, 2-15 MHz
Operating voltage: 110-230V 50-60 Hz

• 33966 i8 ECOCOLOURDOPPLER+4D PROBE AND PACKAGE
Same as code 33965 but with 4D real time imaging composed of 3D pictures with the addition of live motion and probe 4D convex (33959).

• 33942 CARDIAC PACKAGE (to be ordered with colourdoppler) (colour M, CW, sterring M, ECG, TDI, IMT)

• 33943 I-IMAGE to improve image quality -spare Intelligent I-image optimization

		PROBES	FREQUENCY (MHz)		● Main application						
GIMA code for IVIS-30	GIMA code for i8	Scanning Method	Main freq.	Probe band width	ABDOMINAL	OB/GYN	UROLOGY	SMALL PARTS	CARDIOLOGY	PROCTOLOGY	PEDIATRICS	VESSELS
33954	-	CONVEX	3.5	2.5 - 5.3	●	●	●					
-	33953	CONVEX	3.5	2.0 - 6.8	●	●	●					
33955	33955	LINEAR	7.5	5.0 - 12.0				●				
-	33956	MICRO-CONVEX (TRANSVAGINAL)	6.0	4.0 - 12.0		●						●
33964	-	MICRO CONVEX (BASIC CARDIAC)	3.0	2.5 - 6.4					●			
-	33963	CARDIAC (PHASED ARRAY)	3.0	2.0 - 5.4					●			
-	33958	PEDIATRIC	5.0	3.5 - 9.3							●	
-	33959	4D CONVEX	4.0	2 - 6.8	●	●						

33953

33955

33956

33963

33958

33959

• 33993 SONY UP - 25 MD COLOUR PRINTER A6
suitable for IVIS-30 and i8

33993

MINDRAY DP-10 AND DP-20 DIGITAL ULTRASOUND SYSTEM

33970

GIMA code	DIGITAL ULTRASONIC DIAGNOSTIC IMAGING SYSTEM
33970	MINDRAY DP-10 B/W system with 1-probe connector, 12.1" high resolution LED monitor, 2 USB port, 1 VGA OUT port, 1 video OUT, 1 S-Video OUT, software, without probe
33971	MINDRAY DP-20 portable B/W system with 1-probe connector, 12.1" high resolution LED monitor, 2 USB port, THI, iStation™, software package, without probe
	ACCESSORIES
33875	Needle guided brackets for Linear probe (33977, 33983)
33876	Needle guided brackets for Micro-Convex probe (33979, 33984)
33974	Lithium-ion rechargeable battery for DP-20
33985	Carrying bag for DP-10, DP-20, DP-30
33986	UMT-110 mobile trolley for DP-10, DP-20, DP-30
33967	SONY PRINTER UP-897 MD

PROBES DP-10 - DP-20			FREQUENCY (MHz)		● Main application									
GIMA code	Mindray code	Scanning method	Main freq.	Probe band width	ABDOMINAL	OB / GYN	UROLOGY	SMALL PARTS	CARDIOLOGY	MSK	VASCULAR	PEDIATRIC	ORTHOPEDICS	INTRAOPERATIVE
33976	35C50EB	Convex	3.5	2.0 - 5.0	●	●	●					●		
33977	75L38EB	Linear	7.5	5.0 - 10.0	●			●		●	●	●	●	
33978	65C15EA	Convex	6.5	5.0 - 8.5	●				●			●		
33979	65EC10EB	Micro-convex	6.5	5.0 - 8.5		●	●							
33980	35C20EA	Micro-convex	3.5	2.0 - 5.0	●	●	●					●		
33983	75L53EA	Linear	7.5	5.0 - 8.5	●			●		●	●	●		●

DP-10 slim and smart
Good image quality, easy to use and lightweight to take it anywhere. It combines fashionable design, diagnostic confidence and economy.

DP-20 exceeds your expectations
Smart portable B/W ultrasound system with advanced features

Display modes and imaging processing:
Broadband, multi-frequency imaging: B, B/B, 4B, B/M, M

Imaging processing:
- multi-frequency probes for 2D imaging modes - DP-10 only
- iClear: speckle reduction image - DP-20 only
- THI (Tissue Harmonic Imaging) with convex probe 33976 only
- TSI (Tissue Specific Imaging) - DP-20 only
- zoom function: spot zoom, pan zoom

User interface
- alphanumeric QWERTY keyboard with backlight
- trackball: speed presettable
- 8-segment TGC
- user defined blank keys: shortcut for easy access to menus

iStation™ intelligent workflow
Intelligent patient data management system
- integrated search engine for patient data
- detailed patient information review
- intelligent data backup/restore
- patient data/image sending, data deleting (USB , DVD, DICOM)
- exam managing: activate exam

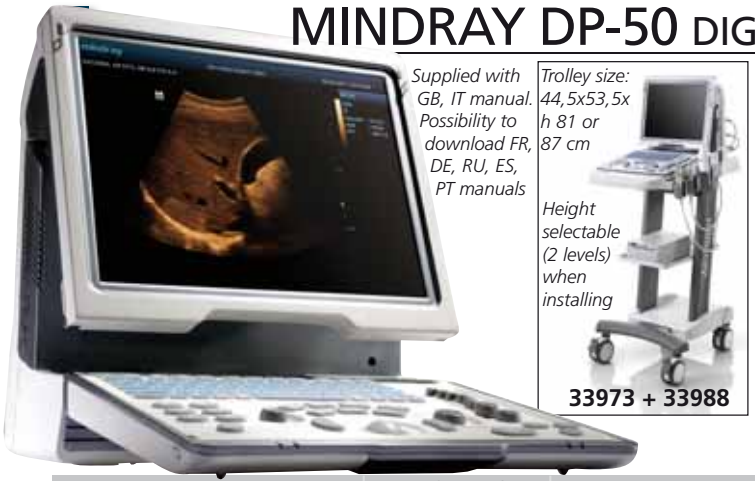
Storage/review mode:
- image archive on hard disk and USB mobile storage medium, temporary saving in cine memory, directly transfer report to PC
- 2 USB ports
- multiple image formats: BMP, JPG, DCM, FRM, AVI (DP-20 only), DCM, CIN
- iVision: demo player
- Cine review: auto, manual (auto review segment can be set), supports linked cine review for 2D, M images (DP-20 only)
- Cine memory capacity (max.)
- clip length presettable: 1-60 s

B mode: 11959 frames M mode: 110.0 s
Supplied with GB, IT manual FR on request.

TECHNICAL SPECIFICATIONS

Dimension and weight:	16x29xh 35.4 cm (6.3"x11.4"xh 13.9"); 5.1 kg
Display:	12.1" LED, high-resolution 1024x768
Display language:	DP-10, DP-20: GB, FR, DE, IT, ES, PT, RU, CZ, PL
Power:	AC100-240 V, 50-60 Hz Rechargeable lithium-ion battery (DP-20 only) - on request

MINDRAY DP-50 DIGITAL ULTRASOUND DIAGNOSTIC SYSTEM


Supplied with GB, IT manual. Possibility to download FR, DE, RU, ES, PT manuals
Trolley size: 44,5x53,5x h 81 or 87 cm
Height selectable (2 levels) when installing
33973 + 33988

PROBES DP-50			FREQUENCY (MHz)		● Main application								
GIMA code	Mindray code	Scanning method	Main freq.	Probe band width	ABDOMINAL	OB / GYN	UROLOGY	SMALL PARTS	CARDIOLOGY	MSK	VASCULAR	PEDIATRIC	PROSTATE
33982	35C50EA	Convex	3.5	2.0 - 5.0	●	●	●					●	
33983	75L53EA	Linear	7.5	5.0 - 10.0	●			●		●	●	●	
33978	65C15EA	Convex	6.5	5.0 - 8.5	●				●			●	
33984	65EC10EA	Micro-convex	6.5	5.0 - 8.5		●							●
33990	10L24EA	Linear array	10.0	8.0 - 14		●		●		●	●	●	

• 33973 MINDRAY DP-50 PORTABLE ULTRASOUND with 15" high resolution LCD monitor, 2 probe connectors, 320GB hard disk, 4 USB ports, multiple software package, without probes.
Imaging mode: B, B/B, 4B, B/M, M
Image processing technology:
- Phase Shift Harmonic Imaging - Tissue Harmonic Imaging
- iBeam™ Spatial Compound Imaging
- iClear™ Adaptive Speckle Suppression Imaging
- iTouch™ Auto Optimization - Trapezoid imaging
- iZoom™ Automatically expand the image to full screen
- Slant scanning for linear probes (2D Steer)

Wideband multifrequency probes: continuously adjustable 2-14 MHz
Intelligent Workflow/Storage/Review:
- iStation™ Intelligent patient data management system
- 320 GB integrated hard disk for storage - 4 USB ports
- Cine memory capacity (Max.) B mode: 10566 frames
  M mode: 66.3 s

• 33975 LITHIUM-ION RECHARGEABLE BATTERY for DP-50
• 33987 CARRYING BAG for DP-50
• 33988 UMT-150 TROLLEY for DP-50
• 33967 SONY PRINTER UP-897 MD

TECHNICAL SPECIFICATIONS

Size and weight:	19x41.5xh 37.8 cm (7.5"x16.3"xh 14.9"); 7.7 kg (17 lb)
Display:	15" LCD
Display language:	GB, FR, IT, ES, PT, RU, PL, CZ, TR, FI, DK, NO, SE, DE
Power:	AC 100-240 V - 50/60 Hz rechargeable lithium-ion battery - on request

SONOTOUCH™ 10.4" - TOUCH ULTRASOUND B/W OR COLOUR

• 33920 SONOTOUCH™ 10 - B/W
• 33921 SONOTOUCH™ 20 - colour
Lightweight, portable, small size, touchscreen ultrasound devices.
Main features:
- display mode: B, B/B, 4B, B/M, M and Colour mode (only 33921). In the M or B/M mode, 4 steps sweep speeds.
- multi-step display magnification, depth enhancement
- setting adjustment of total gain, and 8 segments of TGC slides for selection and adjustment
- multifocal firing focus, edge enhancement, frame averaging, compound
- image freezing and storage function, built-in 4 GB (33920), 16 GB (33921) high-speed memory and external USB memory disk can be connected to the system for mass storage through USB port. Stored images can be retrieved for analysis.
- 256 frames of real-time images can be stored in Cine-memory
- probe scanning direction can be changed and the image can be reversed in left/right, up/down direction
- measurements of distance, area, circumference, volume, OB etc. Automatic calculation of OB and cardiology. Direct display of gestation age, expected date of child delivery and direct measure of heart rate
- real-time clock displays date and time automatically
- display of body marks with corresponding probe position indication
- annotation function in image area of the screen. Special annotation terms for different exam-mode can be added according to user's requirement
- battery operated, battery life up to 2.5 hours

Button free screen and waterproof front panel
Select your applications from visual icons
Refine the image with easy, touch driven TGG, focus and depth
Take measure with your fingers, no trackball (accuracy 1 mm)
Adjustable angle stand converts into carrying handle

GIMA code	PROBES	FREQUENCY (MHz)		● Main application							
	Scanning Method	Main freq.	Probe band width	ABDOMINAL	OB/GYN	UROLOGY	CARDIOLOGY	VASCULAR	SMALL PARTS	MSK	PAEDIATRIC
33922	CONVEX	3.5	2.5 - 5.0	●	●	●					
33923	LINEAR	7.5	5.0 - 10.0					●	●	●	
33924	MICRO-CONVEX	3.0	2.5 - 5.0	●	●		●				
33925	PHASED ARRAY	3.0	2.5 - 4.4	●			●				
33926	TRANSVAGINAL	6.0	4.0 - 7.5		●	●					
33927	MICRO-CONVEX	6.0	4.0 - 8.0								●

CHISON Q5, Q9 AND Q9 4D PORTABLE COLOURDOPPLER

• 33950 CHISON Q5 COLOURDOPPLER with 2 probe connector, 15" high resolution monitor, 320 GB hardisk, 2 USB port, LAN port, Video, TV, VGA out, without probe.
Portable digital colourdoppler with high professional features:
Imaging mode:
- B, 2B, 4B, B/M, M
- CFM
- PW mode
- Instant Triplex, Duplex, Quadplex
- Power Doppler / Directional PD
- Trapezoidal
- Chroma B/PW

Image processing technology:
- Multi-beam former technology
- I-image™: image optimization software
- THI
- Speckle reduction algorithm (SRA)
- Multiple compound imaging (MCI)

Operating voltage: 110-240 V, 50-60 Hz. Manual: GB, IT, on request FR.

• 33952 CHISON Q9 COLOURDOPPLER
Same as Q5 but with TDI quantitative cardiac dialysis, THI on all probes, double phase digital beam, DPDBF, IMT calculation, needle enhancement, 160 GB hard disk.
Suitable for cardiac use.

• 33951 CHISON Q9+4D COLOURDOPPLER
Same as Q9 but with 4D real time imaging.

• 33901 TROLLEY FOR Q5, Q8, Q9

• 33943 I-IMAGE for improving image quality

GIMA code for Q5	GIMA code for Q9	PROBES	FREQUENCY (MHz)		● Main application							
		Scanning Method	Main freq.	Probe band width	ABDOMINAL	OB/GYN	UROLOGY	SMALL PARTS	ENDOCAVITY	CARDIOLOGY	PROCTOLOGY	PEDIATRICS	VESSELS
33954	-	CONVEX	3.5	2.5 - 5.3	●	●	●						
-	33953	CONVEX	3.5	2.0 - 6.8	●	●	●						
33955	33955	LINEAR	7.5	5.0 - 12.0				●					●
33956	33956	TRANSVAGINAL (MICRO-CONVEX)	6.0	4.0 - 12.0		●	●		●				
-	33957	CARDIAC (PHASED ARRAY)	3.0	2.0 - 5.4						●			
33958	33958	PEDIATRIC	5.0	3.5 - 9.3								●	
-	33959	4D CONVEX	4.0	2 - 6.8	●	●							

For probes purchased separately from ultrasound it is necessary to supply the serial number of the device

GIMA VITAL SIGNS MONITORS

"Vital Signs" is a line of small multi-parameter patient monitors, which can monitor the vital physiological parameters: non-invasive blood pressure (NIBP), pulse oxygen saturation (SpO_2), electrocardiogram (ECG), temperature (TEMP) and capnography ($EtCO_2$).

Features:
- small size, clear and bright display for remote view
- up to 400 groups of NIBP measurements can be stored and listed
- up to 90 hours of $EtCO_2$, SpO_2 and HR trend curve can be displayed
- built-in rechargeable battery, optional built-in thermal printer

GIMA code	MONITOR	SpO_2	NIBP	ECG	CO_2	TEMP
35120	VITAL-S	•				
35121	VITAL-SNT	•	•			•
35122	VITAL-SNET	•	•	•		•
35123	VITAL-C	•			•	

35125	Printer*- optional	* Installation done by Gima if ordered with monitor. Need service if ordered later.
35141	Paper 5.1 cm x 12 m - box of 5	
35126	Lead acid re-chargeable battery - spare	
35135	Adult SpO_2 probe - spare	
35136	Pediatric SpO_2 probe	
35137	ECG cable - spare	
35140	NIBP cuff - 10-19 cm - pediatric	
35142	NIBP cuff - 18-26 cm - pediatric XL	
35139	NIBP cuff - 25-35 cm - adult	
35143	NIBP cuff - 33-47 cm - adult XL	
35127	Trolley - adjustable 73 to 113 cm	
35128	Rail clamp	

TECHNICAL SPECIFICATIONS

NIBP
Technology: Oscillometric method
Standard measurement range:
Systolic: Adult: 50-240mmHg
Diastolic: Adult: 15-180mmHg
MAP: Adult: 25-200mmHg
Measurement mode: Manual, Auto, STAT

SpO_2
SpO_2 measurement range: 0%- 99%
SpO_2 measurement accuracy: 75%-99% ±2%
50%-74% ±3%
Low perfusion performance: 0.4%
Pulse rate measurement range: 30bpm~240bpm
Pulse rate measurement accuracy:
± 2bpm or 2% whichever is greater

ECG and TEMP
Heart rate range: 20bpm~300bpm
TEMP measurement range: 25°C~45°C
Accuracy: ±2bpm or 1% whichever is greater (ECG) ±0.2°C (TEMP)

CO_2
Technology: Infrared absorption method
Sampling Mode: Sidestream or Mainstream
CO_2 Response Time: - Sidestream: <3seconds (includes transport time and rise time)
- Mainstream: <60ms (rise time)

Power
AC power supply voltage: 100~250V, 50/60Hz
International power supply: 12VDC (rechargeable)
Battery specification: 12V 2,3AH (sealed lead-acid battery)

STANDARD ACCESSORIES

	35120	35121	35122	35123
- Adult SpO_2 probe	•	•	•	•
- NIBP adult cuff		•	•	
- Temperature probe - skin type		•	•	
- ECG cable + 10 ECG electrodes			•	
- Sidestream sensor and line kit				•
- Battery	•	•	•	•
- Manual (English)	•	•	•	•

UP 7000 MULTI-PARAMETER PATIENT MONITOR

GIMA code	ACCESSORIES AND SPARES
35135	Adult SpO_2 probe
35136	Pediatric SpO_2 probe
35137	ECG cable
35140	NIBP cuff - arm circumf. 10-19 cm - pediatric
31542	NIBP cuff - arm circumf. 18-26 cm - pediatric XL
35139	NIBP cuff - arm circumf. 25-35 cm - adult
31543	NIBP cuff - arm circumf. 33-47 cm - adult XL
35126	Lead acid rechargeable battery - spare
35141	Paper 5.1 cm x 12 m - box of 5
35150	Trolley - adjustable 73 to 113 cm

STANDARD ACCESSORIES

- Adult SpO_2 probe	- Re-chargeable battery	- Disposable electrode
- NIBP adult cuff	- Printer	- Dust-protective mantle
- Temperature probe - skin	- Power supply cable	- Manual (English, Italian)
- Temperature probe - rectal	- ECG cable	

• 35145 MULTI-PARAMETER PATIENT MONITOR
ECG, RESP, SpO_2, 2 TEMP, PR
- 12.1'' high resolution colour TFT display
- 3 channel ECG amplification
- arrhythmia analysis and ST segment analysis
- up to 800 groups parameter data & 24-hour ECG waveform storage and recall
- 480-hour graphic and tabular trends for all parameters
- 7 trace ECG waveforms simultaneous display
- protection against interference from defibrillator
- adult/pediatric measurement modes
- visual and audible alarms
- built-in rechargeable battery
- built-in thermal printer

TECHNICAL SPECIFICATIONS

NIBP Monitoring

Measuring method:	Oscillometric		
Measuring range:	**Systolic pressure:**	**Diastolic pressure:**	**Mean arterial pressure:**
adult:	40~255mmHg	10~220mmHg	20~215mmHg
pediatric:	40~200mmHg	10~110mmHg	20~165mmHg

TEMP Monitoring
Measuring range: 25.0°C~45.0°C ±0.2°C
Response time: ≤ 150 sec

SpO_2 & Pulse Rate Monitoring
SpO_2 measuring range: 35%~100%
PR measuring range: 30bpm~240bpm ±2bpm

ECG Monitoring
Heart rate measurement: ±0.4mVp~±5mVp
Heart rate display range: 20bpm~250bpm

RESP Monitoring
Measuring method: Thoracic impedance
Monitoring range 0rpm~120rpm,
Monitoring accuracy: ±5% or ±2rpm whichever is greater

Other Technical Specifications
Power supply 100~250Vac, 50/60Hz
Power consumption: <80 VA
Display mode 12.1 inches TFT color LCD
Alarming mode Audible-visual alarm
Networking port Ethernet port

PC-3000 MULTI-PARAMETER PATIENT MONITOR

• 35134 PC 3000 MULTI-PARAMETER PATIENT MONITOR
- 7'' high resolution colour TFT display, 5-channel waveform display
- standard parameters: ECG, RESP, SpO_2, NIBP, 2-TEMP, PR; Arrhythmia analysis and ST segment analysis
- up to 800 groups parameter data & 24-hour ECG waveform storage and recall
- 480-hour graphic and tabular trends for all parameters
- 7-channel ECG simultaneous waveforms display
- protection against interference from defibrillator, electrosurgical knife
- adult / Pediatric measurement modes
- visual and audible alarms; networking capability

GIMA code	ACCESSORIES - SPARES
35135	Adult SpO_2 probe - spare
35136	Pediatric SpO_2 probe
35137	ECG cable - spare
35138	Li-ion battery -spare
35140	NIBP cuff - arm circumf. 10-19 cm - pediatric
35142	NIBP cuff - arm circumf. 18-26 cm - pediatric XL
35139	NIBP cuff - arm circumf. 25-35 cm - adult - spare
35143	NIBP cuff - arm circumf. 33-47 cm - adult XL

STANDARD ACCESSORIES

1 ECG cable	1 NIBP cuff
1 SpO_2 probe	1 Body surface temperature transducer
1 AC power Adapter	1 Power cable
1 Li-ion battery	10 Disposable electrodes
User manual	

TECHNICAL SPECIFICATIONS

NIBP Monitoring

Measuring method:	Automatic measurement by oscillating method	
Cuff inflation time:	<10 seconds (typical adult cuff)	
Initial cuff inflation pressure:	Adult mode: <180mmHg	infant mode: <120mmHg
Overpressure protection limit:	Adult mode: 300mmHg	Infant mode: 240 mmHg

Measuring range

Systolic pressure:	Adult: 40-225 mmHg	Infant: 40-200 mmHg
Diastolic pressure:	Adult: 20-215 mmHg	Infant: 20-165 mmHg
Mean arterial pressure:	Adult: 10-195 mmHg	Infant: 10-150 mmHg
Measurement accuracy:	Systolic ±10%	Diastolic ±10% MAP ±10%
Measurement mode:	Manual, Auto, STAT	
Automatic measuring:	1~240min	
Intervals:	interval tolerance: <10s	

TEMP Monitoring

Measuring range, accuracy:	25.0°C~45.0°C, ±0.2°C

SpO_2 & Pulse Rate Monitoring

Transducer:	dual-wave length LED
SpO_2 measuring range:	35%~100%
Low perfusion capability:	0.4%~5%
SpO_2 display accuracy:	70%~100% ±3%
PR measuring range:	30bpm~250bpm
PR measuring accuracy:	±2bpm

Wide option of screen views available

ECG Monitoring

Heart rate measurement:	±0.4mVp~±5mVp	
Heart rate display range:	20bpm~250bpm	
Display accuracy*:	±1% or ± 2 bpm, whichever is greater	
Heart rate alarm delay time:	≤10s	
Sensitivity selection:	Auto, ×1/2, ×1, ×2, ×4	tolerance: ≤5%
Sweeping speed:	12.5 mm/s, 25mm/s, 50mm/s	tolerance: ≤10%
ECG noise level:	≤30μVP-P	
ECG input loop current:	≤0.1μA	
Input impedance:	≥5MΩ	
Common-mode rejection ratio:	≥89dB	
Time constant:	Monitoring mode≥0.3s Diagnostic mode≥3.2s	
Frequency response:	Monitoring mode: 0.5Hz~25Hz Diagnostic mode: 0.05Hz~75Hz	

RESP Monitoring

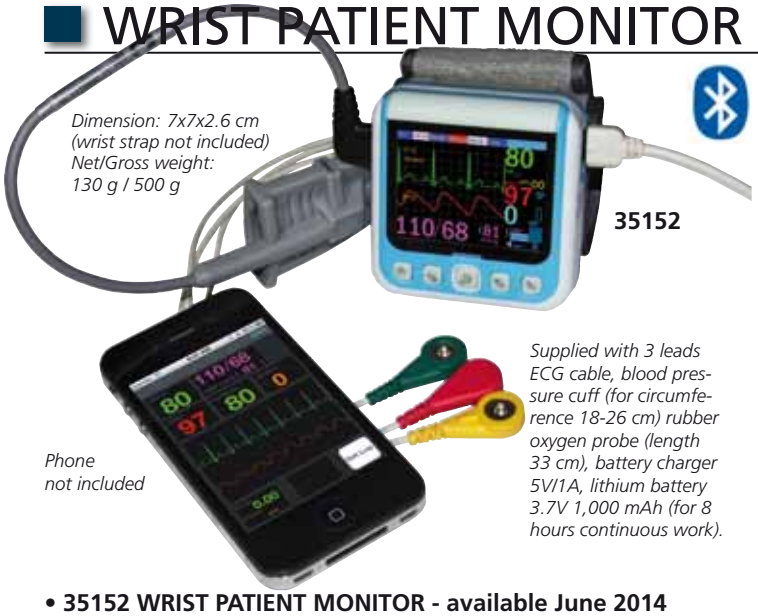
Monitoring range, accuracy:	0rpm~120rpm, ±5% or 2rpm, whichever is greater
RESP alarm range:	0bpm~100bpm Alarm tolerance: ±10%

Other Technical Specifications

Power supply:	100~250Vac, 50/60Hz
Power consumption:	<80 VA
Display mode:	7 inches TFT color LCD
Alarming mode:	Audible-visual alarm
Networking port:	LCD serial/Net port

**Accuracy defined as-mean-square root value of deviation according to ISO 9919*

WRIST PATIENT MONITOR WITH BLUETOOTH



Dimension: 7x7x2.6 cm (wrist strap not included)
Net/Gross weight: 130 g / 500 g

35152

Phone not included

Supplied with 3 leads ECG cable, blood pressure cuff (for circumference 18-26 cm) rubber oxygen probe (length 33 cm), battery charger 5V/1A, lithium battery 3.7V 1,000 mAh (for 8 hours continuous work).

• 35152 WRIST PATIENT MONITOR - available June 2014
Pocket size multiparameter monitor for ECG, heart rate, respiration, blood pressure, oxygen saturation monitoring and recording. Can be used in hospitals, clinics and at home. Low power consumption. Bluetooth 4.0 technology allows data transfer to a free App available at App store. Do not support Android.

TECHNICAL SPECIFICATIONS

ECG

ECG waveform gain:	0.5 mm/mV, 1.0 mm/mV, 2.0 mm/mV	
Scanning speed:	7.5 mm/s, 15 mm/s	
Heart rate and alarm range:	Adult:	30~250 bpm (beats/min)
	Resolution:	1 bpm (times/minute)
	Sensitivity:	>200 uV (Peak-to-Peak value)
Trigger level threshold:	200 nV (Lead II)	
Input impedance:	>5 M Ω	
Common-mode rejection ratio:		≥90 dB
Leakage current:	<10 uA	
Input signal range:	±5 mV	
ECG abnormal types:	Tachycardia, Bradycardia, VPC, Bigeminal rhythm, Tirgeminal rhythm, RonT, VTAC, Escape Beat and Sinus arrest	
Frequency response:	Filter:	0.67 - 40 Hz
	Guardianship:	0.05 - 40 Hz
	Detection:	0.05 - 100 Hz
Calibration signal:	6 mm/mV	
ST segment measurement:	Measured range:	-2.0 mV - +2.0 mV
	Precise:	-0.8 mV - +0.8 mV; ±0.02 mV or ±10%
	Renew period:	10 s

Non Invasive Blood Pressure (NIBP)

Measurement:	Oscillometric method
Measuring range:	30 ~ 280 mmHg ±5 mmHg or ±5%
Overvollage protection:	Yes
Alarm:	Systolic / diastolic alarm error of ± 2 mmHg Atrial premature function
Measuring wrist Week:	135 ~ 215 mm

Oxygen saturation (SpO_2)

Measuring range:	40 - 99% ±2% (90-99%), ±4% (70-89%)
Alarm range:	50 - 99% ±2 (30-80 bpm), ±4 (80-150 bpm) ±5 (150-240 bpm)

Pulse rate

Measuring range:	30-240 bpm

COLOUR MULTIPARAMETER MONITORS

Bed-rail hook
Ergonomic handle
Pacemaker detection inidicated on ECG dispay
58 mm built-in printer for both real time and trend date (Speeds: 25-50 mm/sec)
Battery status indicator
- operating time 2 h
- charging time 4h
GIMA

- **33718 GIMA BM3 MONITOR (7" - 800X480 - TFT display)**
- **33719 GIMA BM3 VET MONITOR - VETERINARY**

ECG+SpO_2+NIBP+RESP+TEMPERATURE

GIMA monitors are configured with
- Heart/pulse rate
- ST analysis, PVC count display
- 3 lead ECG (5 lead optional)
- Non-invasive blood pressure (NIBP)
- Nellcor Pulse oximetry (SpO_2) - pitch tone
- Impedance respiration
- Temperature (sensor is optional)
- Pacemaker detection indicated on ECG dispay
- Battery and direct DC (18 VDC) input (not for recharge)
- Built-in printer (58 mm)
- 120 hours memory trend capacity
- Remote alarm function
- 20 alarm memory
- wired or wireless LAN and HL7
- Internal software selectable in GB, DE, FR; IT, PT, PL, RO, HU, ES, CZ, BG, RU, TR, CN
- User manual: English (on request: Italian, Spanish, French, German).

CE 0123 **33725**

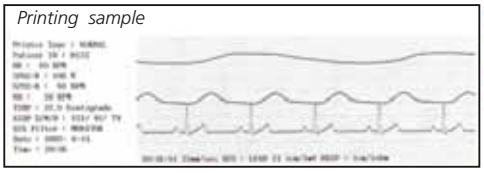
Moving cart increase flexibility around the ward or department.

- **33725 CART** Adjustable height, basket included

See temperature sensors, cuffs, batteries and other accessories at page 247-249.

STANDARD ACCESSORIES	33718	33719
3 lead patient cable (ECG)	•	• vet
Disposable electrodes: 10 pcs	•	•
NIBP tubing - 3m	•	•
Reusable adult cuff 25-35 cm	•	
Reusable child cuff	•	
Set of 3 veterinary cuff		•
SpO_2 sensor - reusable	•	• vet
SpO_2 sensor extension cable 2 m	•	•
Thermal printer 58 mm	•	•
DC adaptor (18 VDC, 2.5A)	•	•
Battery	•	•
User manual: English, Italian	•	•

Printing sample

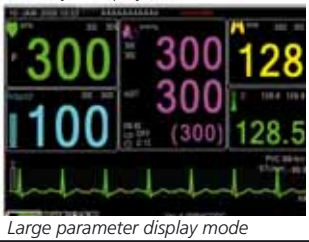


Easy mounting with bed-rail hook

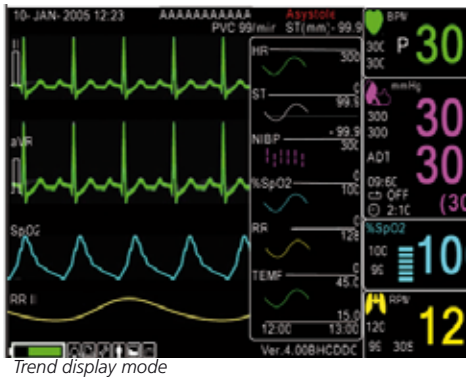
Direct connection of external monitor

Display modes

ST analysis display mode



Large parameter display mode



Trend display mode

PATIENT CENTRAL SYSTEM (up to 31 monitors)

It allows the user to monitor and extract the exact status of several patients simultaneously at a place. Convenient bidirectional comunication allows you to admit new patient information, set alarms at either central station or patient monitor.

- **33745 WIRE CENTRAL SYSTEM**
(PC, monitor and software)
- **33746 WIRE CONNECTION KIT**
One for any monitor to be connected.
- **33758 WIRELESS CENTRAL SYSTEM**
(PC, monitor and software)
- **33759 WIRELESS CONNECTION KIT**
One for any monitor to be connected.

TECHNICAL SPECIFICATIONS

GENERAL

Display:	7" colour TFT (800x480)
Dimensions/Weight:	238x250xh 163 mm/3.1 kg
Indicators:	Up to 4 waves (2xECG, SpO_2, Respiration), categorized alarms (3 priority levels), external power LED, heart rate tone, battery status
Thermal printer:	25, 50 mm/sec (paper width 58 mm)
Battery:	internal battery: Li-ion operating time: 2 hours (fully charged)
Interfaces:	LAN digital output for transferring data DC input connector: 18 VDC, 2.5 A max
Operating voltage:	100-240 V, 50-60 Hz

ECG

Leads:	3 leads, 5 leads(OPTION)
Heart Rate Range:	30 to 300 bpm
Heart Rate Accuracy:	± 3 bpm
ST level:	yes
PVC Count display:	yes
Bandwidth:	0.5 Hz to 40Hz
Display Sweep Speeds:	25mm/sec
ECG Size (Sensitivity):	0.5, 1, 2, 4 mV/cm
Pacemaker Detection Mode:	Indicator on waveform display
CMRR:	>90 dB at 50 or 60Hz
Input Dynamic Range:	± 5 mVAC, ± 300 mVDC
Defibrillator Discharge:	<4 s
Arrhythmia analysis:	VTAC/VFIB/ ASYSTOLIC

Lead-Off Detection with display indicator

SpO_2

% Saturation Range:	0% to 100%
Pulse Rate Range:	0 to 254 bpm
SpO2 Accuracy:	70% to 100% ±2 digits
Pulse Rate Accuracy:	± 2 bpm

NIBP

Technique:	Oscillometric
Measurement Modes:	Manual: Single measurement Auto: Automatic intervals of 1, 2, 3, 4, 5, 10, 15, 20, 30 min. and 1, 2, 4, 8 hours Stat: Continuous measurement for 5 minutes
Cuff pressure display:	50 to 300 mmHg
B.P. measurement range:	Systolic: 0 to 260 mmHg Mean Arterial Pressure: 30 to 220 mmHg Diastolic: 20 to 200 mmHg

Adjustable Cuff Inflation Pressure

Respirations

Range:	5 to 120 breaths/min
Accuracy:	± 3 breaths/min

Temperature Unit

Range:	15° to 45°C (59°F to 113°F)
Accuracy:	± 0.1°C
Compatible with:	YSI Series 400 Temperature Probes

BM5 MULTIPARAMETER MONITOR WITH EXTENDIBLE PARAMETERS

• 33777 GIMA BM5 MONITOR - 10.4" TFT display - 7 ch ECG
• 33779 GIMA BM5 VET MONITOR - 10.4" TFT display

CE 0123 TÜV ISO 9001

ECG+SPO$_2$+NIBP+RESP+ 2 TEMP, 2 IBP + optional ETCO$_2$ MODULE

- high-performance ECG analysis
ST level PVC count display
13 kinds of Arrhythmia analysis
7 channels
- 10.4" colour TFT screen with 6 waveforms
- visible alarm lamp handle
- SpO$_2$ technology with very low-perfusion detection
- SpO$_2$ pitch tone
- 58mm built-in chart recorder
- graphical and tabular trends of printing
- LAN or wireless LAN
- 120 full hours trend data stored
- direct DC input for vehicle transport
- Li-ion battery with long life time
- connection to central monitoring system
- selectable software language (GB, DE, FR, IT, PT, PL, RO, HU, ES, CZ, BG, RU, TR, CN).

12 Channel display

Visible alarm lamp handle

Arrhytmia analysis: VTAG, VFIB, ASYSTOLIC Pacemaker detection indicated on the ECG waveform display

Standard accessories as BM3 monitor, page 245. Other accessories page 247-248.

GIMA code	TEMPERATURE, EtCO$_2$ AND IBP KIT
33740	Exacon temperature sensor 2.75 m - skin type
33741	Exacon temperature sensor 2.75 m - rectal
33796	EtCO$_2$ Sidestream module for 33777/8/9
33790	Intubated Filter Line H - adult - box of 10 for 33796
33791	Intubated Filter Line H - infant - box of 10 for 33796
33792	Non intubated CO$_2$ nasal cannula - adult - box of 10 for 33796
33793	Non intubated CO$_2$ nasal cannula - pediatric - box of 10 for 33796
33794	Non intubated CO$_2$+O$_2$ nasal cannula - adult - box of 10 for 33796
33795	Non intubated CO$_2$+O$_2$ nasal cannula - pediatric - box of 10 for 33796
33798	Li-ion battery 11.1 V for EtCO$_2$ module 33782 only
33787	IBP Kit - disposable - single
33788	IBP Kit - reusable (not autoclavable) - single
33789	IBP Kit - reusable (not autoclavable) - double

33777

33790
Airway adapter set with dehumidification tubing for intubated adult
Suitable also for VET (dog horse)

33792
CO$_2$ nasal cannula - adult

33794
CO$_2$+O$_2$ nasal cannula - adult

33791
Airway adapter set with dehumidification tubing for intubated Infants
Suitable also for VET (cat, puppy)

33793
CO$_2$ nasal cannula - pediatric

33795
CO$_2$+O$_2$ nasal cannula - pediatric

TECHNICAL SPECIFICATIONS FOR MONITOR 33777 - 33778 - 33779 - 33780 - 33781

GENERAL
Dimensions/Weight: 270x185xh 250 mm/4 kg
Trace: 6 waveform (ECGx2, SpO$_2$, RR or EtCO$_2$ IBPx2)
Indicators: categorized alarms (3 priority levels), visual alarm lamp handle, heart rate, SpO$_2$ pulse pitch tone, battery status, external power LED
Thermal printer: 25, 50 mm/sec (paper width 58 mm)
Battery: Li-ion (2 hours operating time)
Interfaces: LAN digital output for transferring date, Nurse call system connection, defibrillator sync. output
DC input connector: 12 to 18 VDC, 2.5A max
Operating voltage: 100-240 V, 50-60 Hz

SpO$_2$
% Saturation Range: 0% to 100%
Pulse Rate Range: 0 to 254 bpm
SpO$_2$ Accuracy: 70% to 100% ±2 digits
Pulse Rate Accuracy: ± 2 bpm

ECG
Lead tipe: 3-lead, 5-lead (33777-33780), 10-lead(33779)
Lead selection: 3-lead: I, II, III (33777/79/80/81)
5-lead: I, II, III aVR, aVL, aVF, V (33780/1 only)
10-lead: I, II, III aVR, aVL, aVF, V1, V2, V3, V4, V5, V6 (33779 only)
ECG Waveforms: 3-lead 1 channel (33777/79/80/81 only)
5-lead: 3/7 channels (33777/79/80/81 only)
10-lead: 3/12 channels (33779 only)
Heart rate range: Adult: 30-300 bpm
Neonate/pediatric: 30-350 bpm
Heart rate accuracy: ± 1 bpm or ± 1%, wichever is greater
Sweep speed: 6.25, 12.5, 25, 50 mm/sec.
Filter: Diagnostic mode: 0,67-150 Hz
Monitoring mode 0,67-40 Hz
Surgical mode: 5-25 Hz
S-T Segment detection range: - 2.0 to 2.0 mV
Arrhythmia analysis: Asystole, Vtach, Vfib, Bigeminy, Accvent Couplet, Irregular, Pause, Pvc, Ront, Trigeminy, Vbrady, Shortrun
Diagnostic analysis: 120 kinds (33779 only)
Pacemaker detection mode: Indicator on waveform display (user selectable)
Protecion: against electrosurgical interference and defibrillation

NIBP
Technique: Oscillometric with linear deflation
Measurement Modes: Manual-Automatic-Continuous
Measurement range: Adult pressure: 20 to 260 mmHg
Pediatric pressure: 20 to 230 mmHg
Neonate pressure: 20 to 120 mmHg
Cuff pressure display: 0 to 300 mmHg
B.P. measurement range: Systolic: 40 to 270 mmHg
Mean: 20 to 230 mmHg
Diastolic: 10 to 210 mmHg
Adjustable Cuff Inflation Pressure

Respirations
Range: 5 to 120 breaths/min
Accuracy: ±1 breath/min
Apnea alarm: yes

Temperature Unit
Range: 15° to 45°C (59°F to 113°F)
Accuracy: ± 0.1°C
Compatible with: YSI Series 400 Temperature Probes

IBP
Channels: 2
Measuring range: -50 to 300 mmHg
Measuring accuracy: ± 1 mmHg (<100 mmHg)
± 1 % of reading(>100 mmHg)
Pulse rate counting range: 0 to 300 beats/min
Zero balancing: range ± 200 mmHg
accuracy ± 1 mmHg
drift ± 1 mmHg over 24 hours
Transducer sensitivity: 5µV/V mmHg

EtCO$_2$
Measurement mode: Sidestream
Measurement range: 0~150 mmHg, 0 to 19%
Respiration range: 2~150 bpm
Accuracy: ± 2 mmHg, 0~40 mmHg
± 5%, 41~70 mmHg
± 8%, 71~100 mmHg
± 10%, 101~150 mmHg
Respiration accuracy: ± 1 breath per minute

BM1: SLIM AND LIGHT MONITOR WITH STRONG MOBILITY

• 33714 GIMA BM1 MONITOR SpO$_2$+NIBP optional Temp. and EtCO$_2$

SpO$_2$+ NIBP optional TEMP and EtCO$_2$

Supplied with NIBP adult cuff (25-35 cm) with 3 m extension hose, SpO$_2$ adult finger probe with extension cable (2 m) DC adapter (15 VDC, 2.0 A) pole mount bracket, shoulder strap, rechargeable battery.

CE 0123

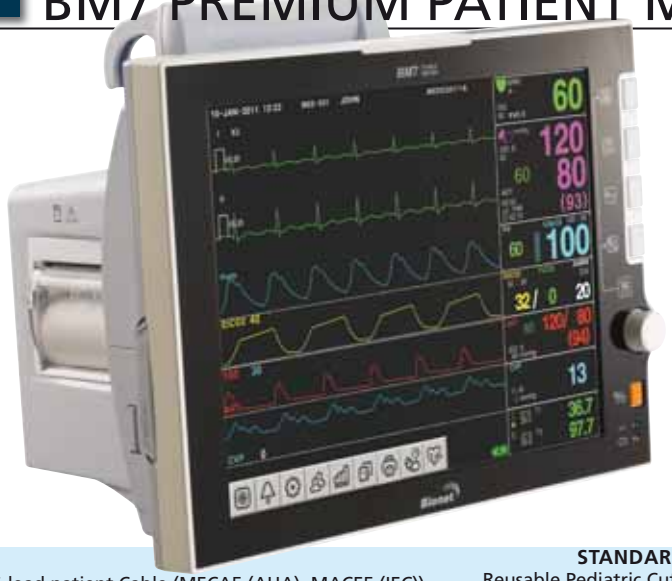
Professional multiparameter monitor in compact size:
- only 60 mm (2.36 inch) thick and 1.0 kg (2.2lb)
- easy mounting to an IV pole
- 4.5 hours battery operation (rechargeable li-ion)
- top handle and rear grip
- monitoring mode and spot check mode
- 4.3" color TFT monitor for clear view 480x272 pixels
- touch key and wheel navigation
- external VGA output for large LCD monitor (option)
- saves 128 hours trend and 400 cases
- multilanguage selectable software (GB, FR, IT, ES, DE, PL, PT, RO, BG, HU, CZ, RU, TR, CN, KR)
- highly advanced CO$_2$ monitoring technology
- plug and play EtCO$_2$ module

Use same accessories of BM line
SpO$_2$, TEMP, EtCO$_2$, NIBP technical specifications same as BM5.

• 33710 Li-Ion RECHARGEABLE BATTERY - spare

Size: 190x125x60 mm
Weight: 1 kg

BM7 PREMIUM PATIENT MONITOR FOR INTENSIVE CARE



• 33774 BM7 MONITOR 12.1" touch screen LCD display - 7 channels
Premium patient monitor for intensive care.
Superior features:
- touch screen operation display
- individual sweep speed setting for each parameter
- 168 full hours of trend data storage
- 4-split large multiple display modes
- oxy/CRG
- drug calculation
- screen freeze ON-OFF
- ST level analysis histogram

High performances:
- ECG, SpO_2, NIBP, Respiration, 2 Temp, 2 IBP
- Sidestream $EtCO_2$ - optional
- 13 Arrhythmia analysis modes
- high performance **Suntech NIBP**
- Li-ion battery with longer life time (1.5 hrs continuous operation)
- possibility to connect to BM central monitoring system see page 245

• 33709 Li-ion BATTERY 11.1 V - spare
Same accessories and probes as BM5 monitors, see page 246,248.

STANDARD ACCESSORIES

5-lead patient Cable (MECA5 (AHA), MACE5 (IEC))
Electrodes - box of 10
NIBP extension tube (3m)
Reusable Adult Cuff (25-35 cm)
Reusable Pediatric Cuff
SpO_2 extension cable (2m)
Reusable Adult SpO_2 probe
DC adapter (18 VDC, 2.5A)
Li-ion 11.1 V battery
Thermal printer
2 paper roll
User manual: GB, IT

TECHNICAL SPECIFICATIONS

MONITOR
Display, Resolution 12.1" color TFT. 800x600 pixels
Dimension 322x250x224.8 mm
Weight Approx. 4.5 kg
Trace 6 waveforms: 2xECG, SpO_2, RR or $EtCO_2$, 2xIBP
Sweep speed: 6.25, 12.5, 25, 50 mm/sec
Indicators Categorized alarms (3 priority levels)
Visual alarm lamp handle and heart beat tone
QRS beep & SpO_2 pulse beep
SpO_2 pitch tone
Battery status, external Power LED
Interfaces Touch screen, rotary knob
Connectors DC input connector: 18 VDC, 2.5 A
Defibrillator Sync. Output:
- Signal level: 0 to 5 V pulse
- Pulse width: 100 ± 10 ms

LAN dIgital output for transferring data
External VGA monitor connection
DC output 5VDC. 1A Max
Battery Rechargeable Li-ion battery, 1.5 hours continuous operation
Thermal Printer Speed: 25, 50 mm/sec, paper width: 58 mm
Data Storage 168 hours trends, 20 cases of 10 sec alarm waveform
USB memory storage
Internal language (selectable) GB, FR, IT, ES, DE, CZ, PL, PT, RO, BG, HU, TR, RU, CN, KR

ECG
Leads type 3-lead, 5-lead
Lead selection 3-lead: I, II, III
5 lead: I, II, III, aVR, aVL, aVF, V
ECG waveform 3-lead: 1 channel
5-lead: 2/7 channel
Heart rate range Adult: 15-300 bpm
Neonate/pediatric: 15-350 bpm
Heart rate accuracy ±1 bpm or ±1% wichever is greater
Sweep speed 6.25, 12.5, 25, 50 mm/sec
Filter Diagnosis: 0.05~120 Hz
Monitoring: 0.5~40 Hz
Moderate: 0.5~25 Hz
Maximum: 5~25 Hz
S-T segment detection range -2.0 to 2.0 mV
Arrhythmia analysis ASYSTOLE, VTACH, VFIB, BIGEMINY, ACCVENT, COUPLET, IRREGULAR, PAUSE, PVC, RONT, TRIGMINY, VBRADY, SHORTRUN
Pacemaker detection mode
Indicator on waveform display (user selectable)
Protection Against electrosurgical interference and defibrillation

RESPIRATION
Method Thoracic impedance
Channel selection RA-LA or RA-LL
Measurement range 5-120 breath per minute
Accuracy ±1 breath per minute
Apnea alarm Yes
SpO_2 range 0 to 100%; (70 to 100% ±2% digits)
Pulse rate range 0 to 254 bpm ±2 bpm

NIBP SUNTECH
Method Oscillometry
Operation Mode manual / Automatic / Continuous
Pressure measurement range 0-300 mmHg
Safety pressure: Adult: 300 mmHg
Neonate: 150 mmHg
Blood pressure: Adult pressure: 20 to 220 mmHg
Measurement range: Pulse rate: 30-220 bpm
Pediatric pressure: 20-160 mmHg
Pulse rate: 30-220 bpm
Neonate pressure: 20-130 mmHg
Pulse rate: 30-220 bpm
Accuracy: The static pressure measurement is within ±3 mmHg
Meets ANSI/AAMI SP 10 2002

TEMPERATURE
Measurement range: 10 to 45°C (59 to 113°F) ±0.1°C
Compatibility YSI SERIES 400 temperature probes

IBP
Channels 2
Measurement range: -50 to 300 mmHg
Accuracy <100 mmHg ±1 mmHg
>-100 mmHg ±1% of reading
Pulse rate measurement range 0 to 300 bpm
Zero balancing Range: ±200 mmHg
Accuracy: ±1 mmHg
Drift: ±1 mmHg of over 24 hours
Transducer sensitivity: 5 µV/mmHg
Pulse rate measurement range: 0 to 300 bpm

BM1, BM3, BM5, BM7 MONITOR ACCESSORIES

GIMA code		ACCESSORIES FOR BM1, BM3, BM5, BM7
33738	NIBP	Extension cable, 3 m (necessary for all cuffs)
33735		Adult cuff - 49x15 cm - need ext. cable 33738
33736		Child cuff - 35x11 cm - need ext. cable 33738
32848		Obese cuff 62x75.5 - need ext. cable 33738
33737		Kit of 3 neonatal cuffs - needs cable 33738
32810		Mini cuff 16x5 cm - needs 33738+33739
32811		Mini cuff 23x5 cm - needs 33738+33739
33739		Metal connector (necessary for mini cuff)
33740	Temp	Exacon temperature sensor 2.75 m, skin type *Compatible with Drager MM15114, MM15822, GE 21733601, Philips HP21059B, Nihon Kohden P242A, Datascope 0206-02-0003*
33741		Exacon temperature sensor 2.75 m, rectal
33743	Paper	Thermal paper 57.5 mm, 38 Ø
33742	Battery	Ni-MH 12V battery - up to january 2006** - BM3, BM3 Plus
33715		Ni-MH 12V battery - Since january 2006** - BM3, BM3 Plus
33717		Li-ion battery - Since Sept. 2007** - new BM3, Plus, BM5
33798		Li-ion battery 11.1 V - 6 cell for $EtCO_2$ - for 33782 only
33710		Li-ion battery 11.1 V for BM1
33709		Li-ion ba ttery 11.1 V for BM7
33770	Adapter	AC adapter for BM3, BM5, BM7

***Date is approximative. Please select battery according to picture and specifications*

ECG CABLES FOR BM MONITORS

GIMA code	ECG CABLES FOR BM3 (33718, 33719, 33720, 33721, 33722, 33723, 33724, 33780, 33781)
33711	3-lead patient cable kit (cable+snap connectors 33748)
33712	5-lead patient cable kit (cable+snap connectors 33749)
33726	3-lead patient cable kit (cable+snap connectors 33750)
33728	5-lead patient cable kit (cable+snap connectors 33751)
33727	3-lead veterinary cable kit (cable+3 clips connectors)
33713	3-lead veterinary cable kit (cable+3 clips connectors)
33748	3-lead snap connectors for 33711 - spare - new
33749	5-lead snap connectors for 33712 - spare - new
33750	3-lead snap type connectors for 33726 - spare - old
33751	5-lead snap type connectors for 33728 - spare - old
33752	Vet 3-lead clip type connectors for 33726-7 - spare - old
33753	Vet 5-lead clip type connectors for 33728 - spare - old
33760	Vet 3-lead clip type connectors for 33713 - spare - new
33761	Vet 5-lead clip type connectors for 33712 - spare - new
33762	3-lead patient cable
33763	5-lead patient cable
	ECG CABLES FOR BM5-BM7 (33777, 33778, 33779, 33797)
33764	3-lead patient cable kit (cable + snap connector)
33765	10-lead patient cable kit (cable + snap connector) only 33778
33766	3-lead veterinary cable kit (cable + clip connector)

ACCESSORIES FOR MONITOR BM3, BM5, BM7

NEW (after 6/2006)

3 Lead

33760 *Vet clip connect* — 33762 *Cable* — 33748 *Snap connect*

5 Lead

33761 *Vet clip connect* — 33763 *Cable* — 33749 *Snap connect*

OLD (before 6/2006)

3 Lead

33752 *Vet clip connect* — 33750 *Snap connect.*

5 Lead

33753 *Vet clip connect* — 33751 *Snap connector*

BM1, BM3, BM5, BM7 SpO_2 SENSORS - NELLCOR COMPATIBLE

GIMA code		ACCESSORIES FOR ALL BM MONITORS
33733	SpO_2	Extension cable*, 2 m (7 pin small SpO_2 connector) up to 2005
33734		Extension cable*, 2 m (6 pin SpO_2 connector) sold in 2005/6/7
33716		Extension cable*, 2 m (7 pin big SpO_2 connector) since 2007
33730***		Adult reusable finger probe (> 45 kg) Nellcor comp. - 7 pin
33731		Pediatric reusable finger probe (15-45 kg) - Nellcor comp.
33732		Vet reusable probe - clip
33755		Disposable infant probe - under 3 kg - Nellcor comp.
33756		Disposable child probe - 3-15 kg - Nellcor comp.
33757		Disposable pediatric probe - 15-45 kg - Nellcor comp.

** Necessary for all probes. Please select correct one*
*** All probes are suitable also for OXY-9*
**** Not compatible with Nellcor NPB40 and N65*

33733 *for units sold before Oct. 2005*

33730

33732

finger/toe 33755

finger/toe 33756

hand/foot 33757

33716

33733

33734

SENSORS COMPATIBLE WITH BCI, NELLCOR, COMDEK

Sensor Picture	Socket Picture	GIMA code	Description	Recommended use	Patient range	Preferred application	Cable length	Min. order	To be used with GIMA codes	Compatible with
		34296	Infant probe	Disposable	under 3 kg	hand or foot	55 cm	box of 10 pcs.	34286, 34290, 34291,33702 (need extension cable 34299)	BCI - Comdek
		34297	Child probe	Disposable	3-15 kg	finger or toe	55 cm	box of 10 pcs.	34286, 34290, 34291, 33702 (need extension cable 34299)	BCI - Comdek
		34298	Pediatric probe	Disposable	15-45 kg	finger or toe	55 cm	box of 10 pcs.	34286, 34290, 34291, 33702 (need extension cable 34299)	BCI - Comdek
		34300	Adult probe	Disposable	over 40 kg	finger or toe	55 cm	box of 10 pcs.	34286, 34290, 34291, 33702 (need extension cable 34299)	BCI - Comdek
		34292	Adult probe	Reusable	over 40 kg	finger	145 cm	1 pc.	34286, 34290, 34291, 33702	Comdek
		34294	Child probe	Reusable	3-15 kg	toe	40 cm	1 pc.	34286, 34290, 34291, 33702 (need extension cable 34299)	BCI - Comdek
		34293	Adult probe	Reusable	over 40 kg	ear	120 cm	1 pc.	34286, 34290, 34291, 33702 (need extension cable 34299)	BCI - Comdek
		34299	Extention cable	Reusable	-	-	150 cm	1 pc.	34286, 34290, 34291, 33702 34293, 34294	BCI - Comdek
		34288	Extention cable	Reusable	-	-	150 cm	1 pc.		Nellcor - Bionics
		33730	Adult child probe	Reusable	over 15 kg	finger		1 pc.	34281, 33290, 33291, BM monitors	Nellcor - Bionics
		33708	Vet probe	Reusable	VET	tongue	145 cm	1pc.	33703	BCI - Comdek